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RETRO* GAMER

ISSUE TWELVE

DAVID CRANE INTERVIEWED!

RETRO GAMER PRESENTS

Llamarama

REAL 8-BIT ROMS PLUS EMULATORS

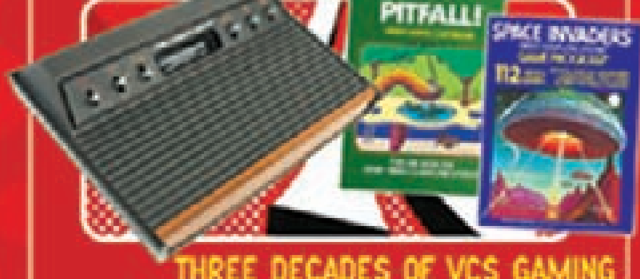


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ATARI 2600 SPECIAL



THREE DECADES OF VCS GAMING

RETURN OF THE YAK



JEFF MINTER ON LIFE AND LLAMATRON

TV CONSOLE ROUND-UP



NEW C64 STICK PUT TO THE TEST

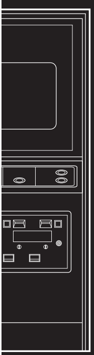
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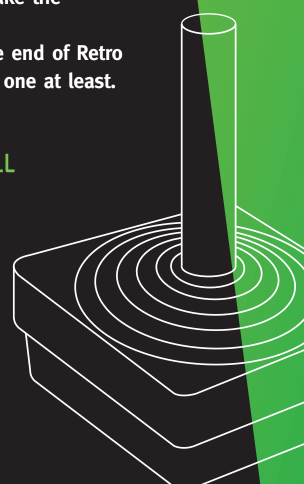
hello

Welcome Retro Gamer readers old and new to issue 12. By all accounts, we should be celebrating the magazine's first birthday, but seeing as the frequency of the first two or three issues was a little erratic, it's a little over a year old now. Thinking back, it's quite strange when you consider that the magazine was originally intended as a quarterly publication. Talk about slightly underestimating its appeal! Anyway, we got up to speed pretty quickly, shifting to a monthly frequency, and we've even been able to publish a 'best of' in the shape of our Retro Gamer Anthology. My feet have yet to touch the ground.

Remember when magazines used to be published in 12-issue volumes? Well, from the next issue the magazine will be going through a few editorial and design changes, so it'll be almost like Retro Gamer volume two, if you like. Don't worry if you enjoy the magazine as it stands, as the core contents will remain the same. We've taken onboard an enormous amount of reader feedback, so the changes are a direct response to what you've told us. And of course, we want to hear your thoughts on the changes, so we can continually make the magazine better.

So that's it, the end of Retro Gamer. Or volume one at least. Enjoy.

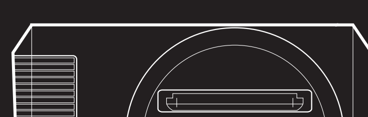
MARTYN CARROLL
EDITOR



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>insides 12















Big N is Watching p46
Thomas Wilde and Alicia Ashby read between Nintendo's infamous 'content guidelines'



Plug and Play p69
Andrew Fisher looks at games released for Commodore's cartridge format



Atari Advertising Gallery p88
We gather together some of the best adverts for Atari's 2600 console



Project Stella p24
Peter Latimer charts the illustrious history of the Atari 2600 console, and chats to David Crane

>Regulars

RETRO NEWS

NEWS-OLA[RG]

Sega Classics Collection

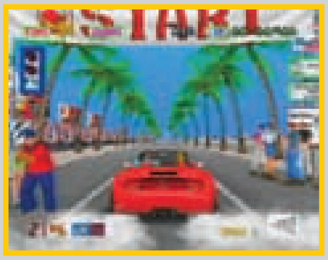
Arcade updates premier on PS2

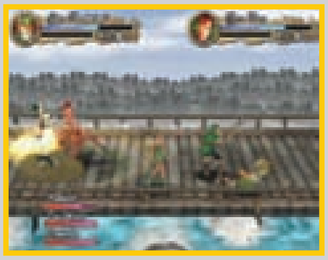
Sega has finally revealed that its collection of arcade updates will be released on the PlayStation 2. These titles, which all feature updated visuals but retain the classic gameplay, were originally released separately in Japan as part of the Sega Ages 5200 series. It was obvious that neither Sony Europe or Sony America would allow the titles to be released separately, on the grounds of not offering customers value for money, so Sega has bundled together nine of the games into one value pack entitled Sega Classics Collection. Makes perfect sense really.

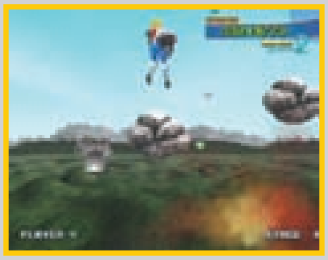
The full games list includes Alien Syndrome, Columns, Fantasy Zone, Golden Axe, Monaco GP, OutRun, Space Harrier, Tant R/Bonanza Bros and Virtua Racing: Flat Out. Some of the more recent Sega Ages titles, such as Afterburner and Virtua Fighter 2, are not included, but we're sure to see these in a future collection.

Sega Classics Collection will be available around February/March time. In the meantime, take a look at the screenshots to see how Sega has given each title a visual polish.









More Megadrive Action

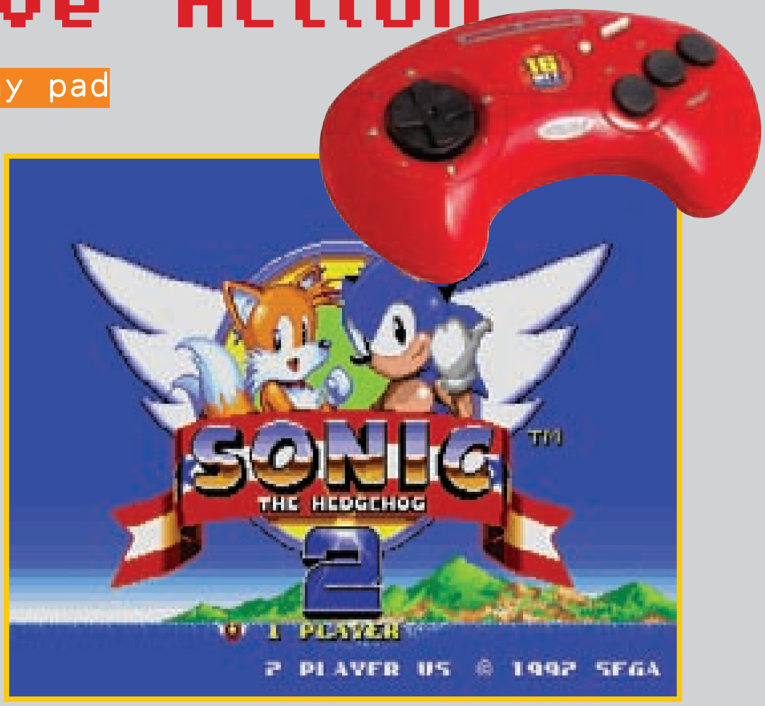
Radica reveals second plug 'n' play pad

Following the success of its first Megadrive pad, reviewed in this month's TV game round-up, Radica has just revealed another collection of Sega classics. Unsurprisingly, the main draw is Sonic 2, which, in our opinion, is the best Sonic game in the series.

Other games include Alex Kidd in the Enchanted Castle, Ecco the Dolphin and the ever-popular Columns. And then it all goes a bit weird, with Gain Ground, a game we think we can remember, and The Ooze, a game we've never even heard of. They seem to be included to make up the numbers, which is a shame considering there are so many Megadrive classics that would be perfectly suited to such a system. Another downer is that there's still no option to connect two pads together, although we gather that it's possible to play Sonic 2 in split-screen mode with the second character controlled by the computer.

The device retails for £24.95 and is available now from **www.firebox.com**.





Important happenings in the wonderful retro world

This month // Sega Classics Collection // New Megadrive TV Game // Atari Classics on Nintendo DS //
Free Dizzy game from Codemasters // Retro Auction Watch // Retro Round-up // Hacking the C64DTV

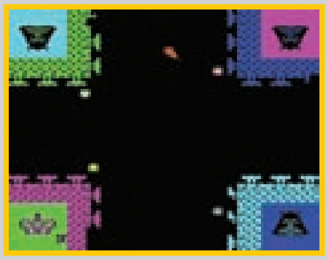
Atari Sees Double

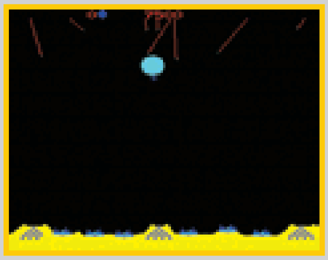
Classic games coming to the Nintendo DS

Atari has pledged support to the new Nintendo handheld by announcing that several of its classic back catalogue titles are DS bound. The imaginatively-titled Retro Atari Classics will feature Pong, Missile Command, Asteroids, Breakout, Centipede, Tempest, Warlords, Gravitar, Lunar Lander and Sprint. The games will be presented in both their original forms and a new 'tagged' mode, featuring brand new looks from some of today's most popular graffiti artists. This really does sound like the worst idea in the world, but we're told the reinvented versions will take advantage of the handheld's features, including dual-screen gameplay, touch-screen controls, and up-to-four-players wireless play. So maybe it will be OK. Maybe.

Retro Arcade Classics will be available in the US from March. No news on the European launch date, but it could very well be a DS launch title.

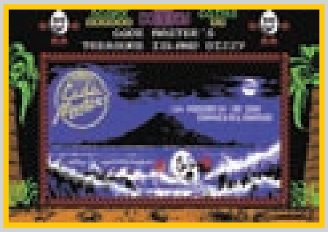






Treasure Island Adventures

Dizzy game available to download





Another of Codemasters' classic 8-bit games has been made available as a free download on its website. The title this time is Treasure Island Dizzy, the second game in the long-running series. As with BMX Simulator, it's the Commodore 64 version of the game, and it comes bundled with an emulator, so all you have to do is double-click the executable file and it will run. The wonders of emulation also mean that you can now save your progress at any point by pressing F9 – great, as Dizzy only has a single life in this game.

We're a bit curious as to why Codemasters has released Treasure Island Dizzy. BMX Simulator made sense, as it was the company's 18th birthday and that was its first ever release. Reading between the lines, we wonder if Codemasters is about to announce a new Dizzy game, and this is just a way of getting the character back in the news. Hmmmm.

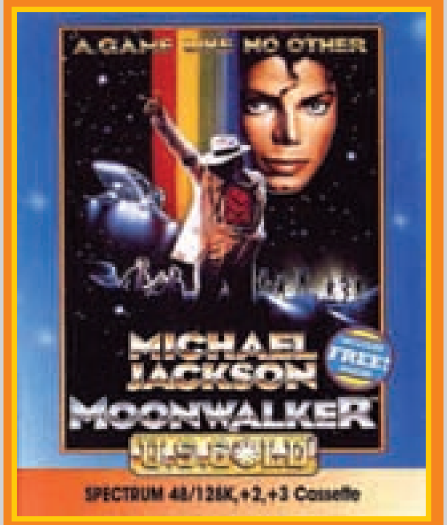
Anyway, Treasure Island Dizzy can be downloaded from **www.codemasters.co.uk**, although you will need to sign up to Codemasters' newsletter before you can grab the game.

Retro Auction Watch

Richard Burton reports on the latest online auctions

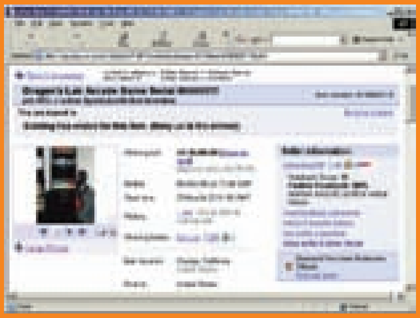
Let's start off by looking at a turkey, and no, not the one you devoured at Christmas. We're talking about a recent eBay auction that you'll want to avoid like a three-day-old cold meat buffet. The auction is for the Spectrum version of Moonwalker, based on the Michael "Chamone" Jackson movie, and it's caused much collective head-scratching on several different newsgroups and forums

This "incredibly rare" Spectrum game, so the auction description from the overly enthusiastic seller would like us to believe, has been listed, relisted and re-relisted, having had no takers at its original Buy It Now price tag of £220! It is now currently available at the bargain basement knockdown price of just £99. How can you resist such temptation for a sure-fire dead-cert collectable of the future? Maybe when it's 25p including postage we'll stick in a late bid...



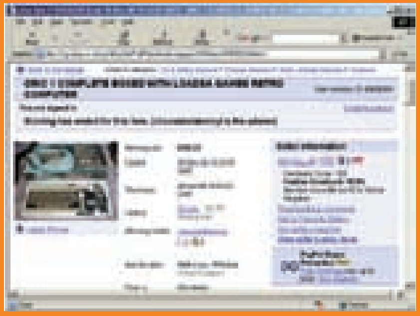
If any of you were lucky enough to have played on the original Dragon's Lair arcade machine when it was first released you'll remember what a stir it caused with its cartoon-quality graphics. Along with OutRun and Space Harrier it was one of those machines you would love to own, but with very little chance of actually being able to achieve that aim. Well, over on eBay USA someone was not only selling an original Dragon's Lair arcade machine in a virtually new state, but it carried the magical serial number 00001 and was also previously owned by the original Dragon's Lair creator Don Bluth.

A genuine piece of gaming history and a genuine bank balance annihilator, with the auction finishing at a dragon-slaying final price of US$8,000. What's more, the buyer was UK-based so we really don't think a bit of bubble wrap and a couple of First Class stamps are going to be enough to cover the shipping on this one.



We finish off with a system that gets very few mentions, the marvellous old Oric-1. Normally the Oric range of computers doesn't command vast sums of money in collecting circles, with an unboxed working machine rarely pushing past the £40 to £50 price mark. So when an Oric-1 complete with a bundle of games and in its original box (albeit damaged) with poly inserts went up for auction we were more than a little surprised to see it pull in a magnificent £332.21. It really must be those poly inserts that command the big money after all!

Our Nostradamus-like prediction for 2005 is that someone somewhere will start making reproduction polystyrene packaging for the discerning retro gamer and make a small fortune. You read it here first!



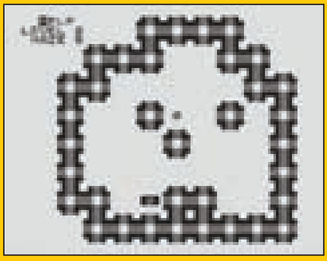
RETRO ROUND-UP

More retro scene news for you to pore over

ZX81 gaming

André Baune is probably one of the most dedicated programmers that you'll come across. Since May of 2004, he has been developing new ZX81 games for the small interest group that exists on the Net. His latest titles are the puzzle games InZXec and Awari. In the first of these you must move the character to a specified location. The second is a mathematical game played against the computer.

Both games are easily accessible and well designed. Only the restrictions of ZX81 BASIC hold them back, though you'll hardly notice, and both are recommended for the logically minded amongst you. Check out **www.zx-team.de/andre** for more information.



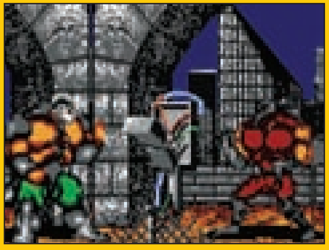
Jack is back!

MSX fans will rejoice at the news that a near-arcade perfect port of Tecmo's Bomb Jack is coming to the MSX2 and compatibles. The game is being developed by the guys at **www.kurarizeku.net** to celebrate the game's 20th birthday, and is available to buy for 15 euros (excluding postage costs). The game requires 64KB RAM and 128KB video RAM, alongside a single-sided disk drive. More information can be found at the BitWise homepage (**www.msx-universe.com/products.php?product=bombjack**).



Comic book violence

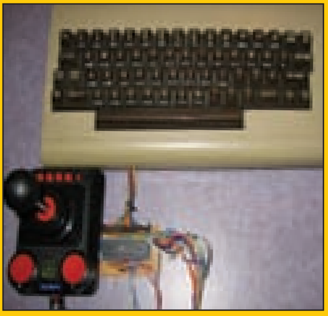
Songbird Productions has announced Ultravore, a new one-on-one beat-em-up for the Atari Lynx. The game is a recently uncovered project originally intended for release from Beyond Games, but it was shelved some years back. The game will have all of the usual fighting elements, including a choice of multiple characters and some crazy special moves, and will also include support for a two-player mode via a ComLynx connection. Keep an eye on **www.songbirdproductions.com** for information on this and other Atari Lynx/Jaguar games coming soon.



Hacking away

It's only a few weeks since the launch of the C64DTV and our friends across the pond have already set about discovering its inner-most secrets. There are a few sites dotted around the Web that will show you how to add a keyboard or a real Commodore-compatible disk drive to it, and even power it from an ATX power supply. There is a faithful version of C64 BASIC hidden away, with a 'soft' keyboard option (for those who want to dabble in BASIC but aren't confident with a soldering iron), as well as hidden games and even enhanced graphical capabilities. The latter is almost 100% compatible with a VIC-II chip, but has extra modes allowing it to display 256 colours.

Aside from this, it's reported that the C64DTV has been a runaway success, almost selling out within the first three weeks of being on sale. We're eagerly awaiting the official European version of the device, with rumours that it may contain different games to its American cousin. More information will be available soon. Hacking and other secrets are revealed at **www.orrville.net/dtvhacking, http://creztor.blogspot.com and www.jbrain.com/vicug/gallery/c64dtv**.



Accreditation: We would like to point out that the 'Under the Bonnet' box and diagram in Retro Gamer issue eight's Konix feature should have been accredited to Simon N Goodwin.

eMag

The RETRO FORUM

Say more with a letter...>



Hidden Frontier

I'm just wondering what was behind the hidden Frontier video in the adverts folder on the cover CD. It looked bloody good by the way, but was this some kind of secret bonus? Or was it mentioned elsewhere that I didn't see? Perhaps you can give a prize to the first person to find it, COUGH COUGH.
Mark Gray, via email

Well spotted Mark. Since issue three's Gremlin coverdisc, we've regularly hidden the odd secret file on the coverdisc, usually in the adverts folder. No particular reason for it – it's just something we like doing. The Frontier intro video you speak of was hidden on the coverdisc for issue nine, and was put together by Mat Recardo and Andy Bellenie of www.preferredimage.co.uk. Oh, and we may have sneaked a little something else onto this month's disc. Well, you never know...

Hooking up hardware

I was just looking through the forum, when I noticed a post or two about transferring games from a retro machine (in this case C64) to a PC for use with an emulator. I was wondering whether it would be a good idea for there to be a short feature in Retro Gamer about transferring files/games from old machines to shiny new PCs (and MACs or course) for use with emulators. Yes I know a quick search on your favourite search engine will find a whole bunch of stuff on the subject, but to be fair, a lot of it is of no use to anyone and the useful pages you do find end up with broken links. I was thinking a short step-by-step on using software like Transrom and Transdisk for the Amiga, and the various tools for transferring recordings (.wav format) to C64 emulator-compatible formats, as well as all of the different cables that can be patched together to



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connect a retro system to a PC/MAC, or the small hardware hacks designed to connect retro devices (such as the C64's Datasette) to a PC/MAC so that the contents of the media can be transferred directly. I know it might be a lot to ask, but some people might not have Internet access, but they might have a huge collection of Speccy tapes that they want to use on their PC/MAC. Just a thought.
Neil, via email

Great idea Neil. In fact, there maybe something along these lines – not exactly mind – in the very next issue. As for step-by-step guides, we'll put that suggestion to our sister magazine, PC Action Emulate!



Don't Believe the Hype

The reason for the email is to congratulate Retro Gamer for having the balls to dispel one of the great myths of gaming; that Jet Set Willy is, in fact, not really that good. Through hours of playing Manic Miner, the heat sink on my Speccy got so hot it melted all the glue on the left hand side of the keyboard, whereas Jet Set Willy simply made me chuck old faithful across the room as I died for the Nth time with that bloody recurring death bug. Thank you Retro Gamer, I salute you.

I do have a couple of moans about games included in the article, but let's face it, why bore you with "Why, oh why, oh why did you include Micro Machines?" style rants. I would imagine you have had enough of these already.

One finally point. I would like to add my voice to Martin Sawyer's letter in issue ten. Let's have more Mac stuff on the coverdisc. The tool of ignorance is catered for enough. Support the Mac.
Mark, via email

We think Jet Set Willy is a great game, although the infamous death bug is a major flaw. The whole point of the article was to generate feedback, encouraging people to write in either agreeing or disagreeing with Jon's comments, and it certainly seemed to have worked. As for Mac coverdisc content, we're trying our best, honest! You'll notice that our last two discs have been Mac compatible, although without fancy disc browsers or any of that stuff.

Outfoxed

I am a new reader to Retro Gamer, I only bought it out of pure curiosity after seeing it (the US print version) in the magazine section of my campus's book store. Pity I didn't start reading until just now (issue nine) despite the fact this was not the first month I saw it in the book store. It's a great magazine, despite the fact that I'm in the US and have no clue what a Spectrum is (although in the past I have owned a Commodore VIC-20, Atari 2600, Atari 5200, Atari ST 540 and an old IBM with an Intel 8080, as well as pretty much every single console by Nintendo). Back ordering, while possible, has the downside of the dollars to pounds conversion rate (moral of story, don't miss out a chance to buy a good magazine like Retro Gamer while it's still available, you'll regret it later on if you do).

But anyway, enough getting off topic here. In issue nine of the magazine you had a person making a request for information on games that didn't come out, including Star Fox 2 (I believe Star Fox was, in Europe, renamed Star Wing and Star Fox 64 became Lylat Wars). That Star Fox 2 didn't come out is an

* Star letter *

Our well-dressed friends at Joystick Junkies (**www.joystickjunkies.com**) produce official clothing based on loads of classic videogames, and the winner can select any T-shirt from the range



Call the President!

I have fond memories of the C64 game, Theatre Europe, a strategy game set in the (then) current day. As I remember, it pitted the forces of a European Alliance against the villainous Eastern Bloc. What made the game really stand out in my memory though was one particularly innovative feature. To get the launch codes for your nuclear arsenal a phone number (undoubtedly premium rate) had to first be called. At the time this really added to the reality of the whole thing. I remember the anticipation, waiting with baited breath as my brother returned from downstairs (or as we saw it the presidential hotline) with the all important launch codes!

I've been trying to think of other mediocre games of the era that were transformed by particularly original and inventive ideas such as this. Perhaps there would be enough material for a feature?
Steve, via email

PS. The game wasn't as good when I bought it from a car boot sale a few years later. The phone line had obviously been shutdown so I was defenceless without my nuclear deterrent!

Great letter Steve, and a fine idea for a feature. It'd be great if readers could send in any gaming novelties like this. We remember that Theatre Europe featured a version of Lennon and McCartney's Give Peace a Chance, which for a was game was surely a novelty in itself.





interesting story, as Nintendo had the game 99.99% complete (only some minor difficulty tweaking was needed before the game could've at least been released in Japan). I don't know the exact details, but somewhere along the line someone took it upon themselves to smuggle out of Nintendo one of the few more or less complete test cartridges and dumped a ROM image from it. For a long time this ROM wasn't of much use to anyone who didn't have the skills and means to modify a Super Mario World 2: Yoshi's Island cartridge to run this unreleased game.

However, with the most recent work in progress version of the SNES emulator ZSNES, you can now finally emulate the ROM with a fairly decent amount of accuracy (for those of you who tried this before, please read that as, "no more blinking, slowdown, or instantaneous 'enemy out of range' messages"). The current work in progress version of ZSNES can be found at **http://ipherswipsite.com/zsnes** (the full version 1.4 may be out by the time you read this as the only thing the team is currently waiting on is the completion of the new version's documentation before they make an official release). As for the Star Fox 2 ROM, you're own your own as it's considered impolite to publish the locations of sites offering ROM images of SNES games (especially with Nintendo's policy on how to view the legality of emulators).

Clovis Dye, via email

Thanks for the info. We had to cut some of your letter for space reasons, but we agree that Star Fox 2 is a very impressive looking game, and it's a shame that Nintendo canned its release when it was so obviously very nearly finished. It's even sadder that we ended up with Star Fox 64/Lylat Wars instead. As for ZSNES, we've featured this excellent emulator on the coverdisc before, and we'll certainly include v.1.4 when it's officially released.

Fighting your corner

I've just picked up issue nine of your magazine, attracted by the copy of Your Sinclair that came with it. When I saw it, it stopped me in my tracks to put it lightly. I can remember buying that magazine every month as a kid, and I honestly thought I had seen the last of it with their Big Final Issue. What I loved about that magazine was its sense of humour, which no other magazine really matched. I was very surprised to see it back on the shelves of my newsagent.

It also brought back a few memories. One in particular was the rivalry between Spectrum owners and Amiga owners when I was a kid. Although I like the Amiga, I can remember getting into some serious punch-ups in my primary school for owning a Spectrum and not being ashamed! The Spectrum used to take a lot of criticism around the turn of the nineties for being cheap and not as sophisticated as the Amiga, or the consoles that emerged around that time. Does anyone else remember this rivalry, or was it only something that happened in the playground of my childhood?

My Spectrum has long since snuffed it, as did the SNES I bought a few years later. I only really discovered PC emulators through issue eight of your magazine. I am now rediscovering the joys of Rebel Star II, which had me hooked long before I discovered Command & Conquer. My social life is now a lot less active thanks to your magazine, but I'm not complaining. Keep up the good work!

Tom, via email

We reckon playground bust-ups over the best computers/consoles happened in most schools, and certainly still do, with kids arguing over PlayStation 2s and Xboxs. We also remember that it wasn't just computers back then either, as kids with VHS video recorders regularly had run-ins with the Betamax boys!

Points of interest

I've been reading the forum recently and noticed that the mag has been coming in for a bit of criticism. I know I have added to this in a small way and thought I would send you this email to let you know my thoughts.

First off, I have been gaming for around 25 years. I started collecting retro gear just over one year ago after getting Pac-Man in an email on my works computer. This encouraged me to look for an Atari 2600 in the mistaken belief that Pac-Man was good on it (see the tricks memory can play?). Whilst browsing on eBay I decided to get a Megadrive to play Sonic and got hooked. I bought every platform I knew and was running out when I came across Retro Gamer issue one magazine selling for £20. Further down I saw issue two selling for £10. I was about to buy these when I decided to check the publisher for back issues. Without ever seeing the magazine I subscribed from issue two. I later extended the subscription by a further 12 issues as I was so impressed with the magazine.

My initial enthusiasm for the magazine was based on the informative articles, news and especially for introducing me to a whole new world of machines I had never heard of. I couldn't wait for the mag to arrive and even paid £35 for a first issue. I have also managed to get various other people interested in retro gaming, especially my six-year-old daughter who now has her own Master System, Megadrive and PlayStation, as well as countless emulators on the PC.

This brings me on to the point of this email. While I am subscribed up to issue 19, I have been slightly disappointed by the last two issues. I've decided to let you know my thoughts rather than just complaining. Firstly I want to say that I hope you continue to produce the magazine for years to come. As the only dedicated retro mag you have set yourself up to receive all of the adulation as well as criticism of the retro community. I hope you have broad shoulders to take on the levels of expectation.



1. I would like to see features of consoles accompanied by reviews of the best games to go with it. A lot of the features on machines have been very

technical and have missed some content I thought would have been more relevant (no Atari consoles mentioned in the Atari feature?).

2. More advice on emulation. I'm not a big fan of emulation but I feel this is an area that is only hinted at in features. I understand the difficulties with copyright but if the subject is going to be raised then why not give more info on getting games running.

3. An article on the future of retro gaming/collecting. I'm thinking primarily of Half Life 2 here. With the excessive security that was included in trying to get this game working I would be interested to know if I will be able to play it in 10 years? Also the increased emphasis on on-line gaming. Is there still going to be an ability to play Counter-Strike in 10 years?

4. A look at the collections of readers and their stories that go along with their collections. I know this was touched on in the first few issues but it seems to have been dropped since.

5. Quality content on the cover CD or else replacing this with other items. I appreciate the issues over copyright again but there have been excellent coverdiscs in the past so it is possible. I don't have any interest in remakes of games as the whole point of my hobby is to play the originals in the original media. If there isn't enough new content for a coverdisc then why not replace it with something else? Again I'm thinking of the YS supplement (which was a highlight from the last year) or even some other cover gift (YS style covertapes would be excellent). Maybe Cronosoft would be able to help.

I am sure you are inundated with emails variously praising and bemoaning your efforts and I would like to point out that I appreciate your hard work in bring this magazine out. It has coincided with my renewed interest in old games in a way that has made it seem as though the magazine was published specifically for me. I will support Retro Gamer for as long as it is published because for the most part it has been both informative and entertaining. I only hope it will continue to be.

Phil Thompson, via email

Thanks for your email Phil, and your feedback on the forum. I'm sure you understand how difficult it can be to try and please everyone. Some people write in and ask for more in-depth technical articles, others want us to concentrate purely on the software. Some people love the PC remakes, others prefer real 8-bit ROMs on the coverdisc. And should we pander to the few who post feedback on the forum, or continue to provide the silent majority with the content they've come to expect month in, month out? It's all about finding that balance, walking that fine line between what our readers want to read in Retro Gamer. To this end, there will be changes introduced as of next issue, so we'll be looking forward to reading your forum feedback.

Funnily enough, the contents of this issue answer many of your questions. We've got an Atari 2600 feature (with reviews of the console's best games), several emulator guides, and real ROMs on the coverdisc again. We're glad you liked the Your Sinclair issue – another one of those is definitely in the works.

Mad old bloke

Hi there fellow sad, old, geeks. I'm not going to go on about how many issues of Retro Gamer I have purchased, nor am I going to tell you about all the old crap computers I own. I love Retro Gamer. That's it, simple as that. Or as our American cousins would say, 'Period'.

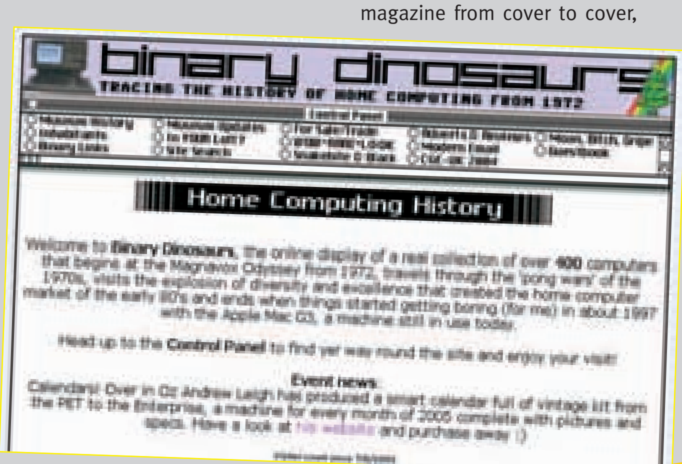
In the letters page of issue ten Shane Reed wrote to ask about donating his MSX to a retro museum. Firstly, it's nice to see that there are still people around not concerned with selling their old computers on eBay for extortionate amounts, so well done Shane. Secondly, I'd like to recommend the Binary Dinosaurs online museum. The guy who runs it had a stall at the CGE this year. He wasn't there to sell crap to unsuspecting retro freaks – he simply showed his beloved collection which was excellent. The Bletchley park and 8-Bit stands were also great.

Anyway, onto the usual bit. What I'd like to see is more 'story of a game' features like the excellent Dungeon Master one I have just finished reading. In particular for my all time favourite game, Elite. How about having more articles about famous old mags of the last few decades? I liked the one on Crash. Or perhaps a 'Where are they now?' feature on the contributors to such magazines. And my last suggestion, how about a regular spot with staff and readers reporting on their favourite retro games they have been playing each month?

I could go on forever about retro stuff but the wife wants a cuppa, so just keep up the good work OK?

Russ Smith, via email

Thanks for the letter Russ. Or course we're sure you know by now that there's a monster feature on Elite in the Retro Gamer Anthology. Expect to see many more 'making of' features in future issues.



Opening closed doors

It's rare for me to read a magazine from cover to cover,



but Retro Gamer is without a doubt the best computer magazine I have come across. And I have read a few, starting my education with Your Spectum and the sublime Crash.

Do you remember a certain John Wilson and those excellent Balrog text adventures? I remember pestering him every week with postal orders for games and tipsheets. I would love to see an in-depth look on those games and the man behind the magic. Plus, any chance of a competition to win a subscription in the future? I would have got one already but I spent the money on eBay getting issue 1, which set me back just shy of £60. Surely this is one of the highest prices paid so far. My missus won't be too pleased you know… some of the money was to pay the phone bill.

Simon Heath, via email

We do remember Balrog, star of the Behind Closed Doors text-adventure games – the ones where you were stuck inside a toilet and had to find a way to escape. John Wilson was the man behind Zenobi Software, and you'll find a brief but interesting history of the company over at www.zenobi.co.uk. You can even get hold of a CD containing the complete Zenobi Software back catalogue for just a fiver. Bit of a bargain really. The same can't be said about your eBay purchase however! A staggering £60 for issue one? That's certainly one of the highest prices we've come across. If the wife finds out we reckon that you'll be the one hiding behind a locked door.

RETRO REVIEWS

From old games on new platforms to new games on old platforms. As long as it's retro, you'll find it in our regular reviews section

If you would like to enter a game into either our Hall of Fame or Shame, send in a review (of up to 650 words), with ratings explaining why your choice deserves a place on the mantelpiece or a trip to the bin. All reviews are gratefully received at reviews@retrogamer.net, and we'll consider them for inclusion in a future issue...

The Legend of Zelda: The Minish Cap

Publisher:	Nintendo
Price:	£39.99
Format:	GameBoy Advance



Ever since the green-clad elf first appeared on our screens some 18 years ago, the adventures of Link, star of the Zelda series, have been universally acclaimed by all who play Nintendo's groundbreaking classics. This latest GBA outing is a classically-inspired Zelda adventure full of delightful content, the sort only Nintendo is capable of producing.

The story of The Minish Cap once again features Link, who this time gets involved in a struggle to save the world from a mysterious warrior who seeks a strange all-consuming power. To perform this epic deed, you'll need to re-forge the Picori sword, the only weapon capable of combating this evil. On the way you'll meet staple Zelda characters, including of course, Princess Zelda herself. You'll also meet up with the Minish people, who are a nation of teensy-weensy people who spend much of their time living in mushrooms and under rocks. And you'll meet the Minish Cap in question – Ezlo who, after settling on your head, will let you shrink down into Minish size, so you can wander around the miniature world.

Numerous comparisons have already been made to Zelda: A Link to the Past on the SNES, and as this is arguably the best Zelda of all (apart from Ocarina of Time of course), it's only fitting, as The Minish Cap is simply excellent in every way. Visually the game adopts the style of the recent Wind Waker, with Link and his world possessing a very cartoony feel. The gameplay borders on genius from start to finish and is packed with tons of clever puzzles and intriguing items for you to use. It's hard to nail down exactly what makes the game so appealing though. Whether it's the superbly designed quests and dungeons, impressive boss fights, awesome story or just the charm that all Zelda games inherently exude, you can't help but love it. In a word – essential.

Aaron Birch

Graphics 93%
Bold, colourful, vibrant and full of character. This is one gorgeous-looking adventure for the GameBoy Advance

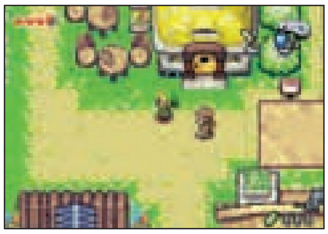


Sound 78%
Zelda has never been noted for amazing sound, but the music is still very memorable.

Playability 95%
Nintendo is the king of producing satisfying and infinitely playable titles, and The Minish Cap embodies this totally

Addictiveness 92%
Zelda games never fail to draw you in to their worlds and this is no different

Overall 94%
Zelda may have gone all 3D on the big consoles, but The Minish Cap shows that you don't need 3D visuals to create an amazing game



Yarkon Blues

Publisher:	**Cronosoft**
Price:	**£1.99**
Format:	**Amstrad CPC cassette**

Veering off course from its destination, the metropolis of Kylie on the planet Minogue, the spacecraft Odour-Eater II crash lands on Yarkon whilst its cargo of McSpewans Spirit is being sampled by the pilot, Rik McQuick. Rik survives by escaping from the doomed ship in his pod, and now you must help him off this godforsaken planet.

You'll come across plenty of humour, some of it rather corny, some lavatorial, as you traverse the planet trying to solve the problems you come up against. What foul horrors lurk behind the door in the sewers? What will satisfy the appetite of the Auto-Trader? How do you cross that bridge? If you're stuck, don't expect any clues! All you'll get is a reference to a Beatles hit should you enter the word 'help'. Be prepared for plenty of restarts as the problems drive you to take more and more risks attempting solutions that are potentially fatal.



Yarkon Blues was written using The Graphic Adventure Creator, an adverture authoring tool launched at a time when text-only adventures were considered boring to all except adventure enthusiasts. Graphics were added in the belief that this would improve their marketability to the arcade-playing hoardes. But the graphics available then were too coarse to do justice to an adventure, which needs a picture rather than a diagrammatic representation. In Yarkon, rather than enhance the game, they detract from it, preventing a far better picture from forming in your imagination, and slowing down the responses to your actions.

Written by Jason Davis, this predates his Smirking Horror (reviewed in Retro Gamer issue 10) and is altogether better.

Keith Campbell

Graphics 30%
Semi-diagrammatic and limited in colour

Sound N/A

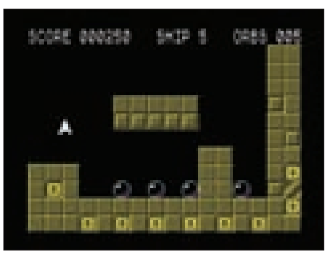
Playability 73%
Slows down while drawing the location graphics

Addictiveness 77%
You'll want to work out the solutions to most of the puzzles

Overall 75%
A few niggles, but nothing major. Excellent value at just £2

Lunaris

Programmer:	**Jonathan Cauldwell**
Price:	**Free download**
Format:	**Spectrum**



Lunaris is an improved version of Jonathan's 'game-in-a-day' written at the OrSam 2004 show, and uses the basic concept of the endearing 8-bit classic Thrust. This new version comes with music courtesy of Matthew Westcott, as well as a few cosmetic improvements, more levels and a handy password system. You'd have thought with these enhancements that the game would have warranted a budget release on the Cronosoft label, but Jonathan has chosen to release it through his website as a nice freebie for Spectrum fans every where.

You take control of a ship that is teleported to different bases. Your task is to collect the colourful orbs within, presumably because they are of great value. The controls for the ship are simple: your craft rotates clockwise and anti-clockwise, and the thrust moves you in the direction that the ship is pointing. You are armed with a simple cannon to obliterate enemies found from level two onwards.

The gravity in the game has a constant pull downwards (as you might expect), and if you leave your ship the desent speeds up rapidly. Moving around the screen isn't easy at first as too much thrust sees the ship heading into a solid wall with no way to stop. Careful control of thrust and direction must be accomplished to collect the orbs and avoid smashing your trusty craft to smithereens. An even trickier task is to control the direction, shot and thrust whilst obliterating your foe successfully.

Lunaris is a very entertaining but simple affair accompanied by great music and timeless gameplay. If you want this free and legal release for your emulator, head over to Jonathan's home page at **http://members.fortunecity.com/jonathan6/egghead.**

Shaun Bebbington

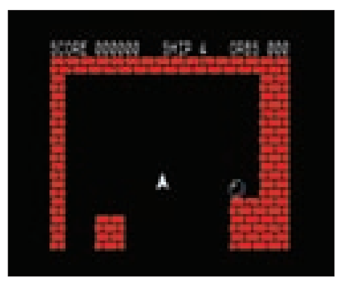
Graphics 82%
Basic but effective, and barely a hint of colour-clash in sight

Sound 87%
Matt Westcott tinkers the old AY-ivories with a great original score

Playability 84%
The control method takes time to master. As you play, manoeuvring the craft becomes easier and easier

Addictiveness 89%
You'll be back, thanks to the password system and well thought-out level designs

Overall 87%
A brilliant (and free) game that'll keep you entertained for a good few hours



Backgammon

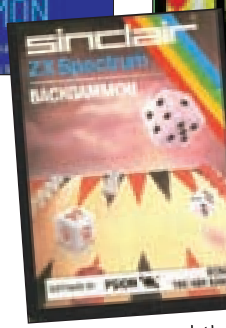
Hall of Fame

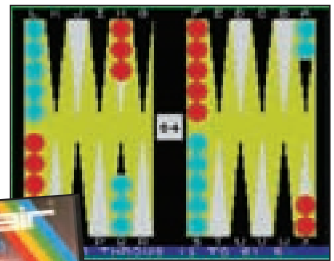
Publisher: Sinclair
Year of release: 1983
Format: Spectrum

Recently I've managed to get my hands on an iPAQ PocketPC, and it's no surprise to those who know me that one of the first pieces of software I downloaded for it was a Spectrum emulator. And what Spectrum game do you think I am now spending my time on it playing? Actually it's Backgammon by Sinclair.

Backgammon was one of the early Sinclair label releases, a very diverse range of software titles set up by Sinclair to get the Spectrum software market on its feet and running. Instantly recognisable (think Scrabble, Horace and Make-a-Chip), the brand carried the Sinclair logo across the top of the inlay and many of the most memorable titles were written by Psion. Backgammon, number 22 in the Games series, is not one of the most memorable titles, but it is written by Psion and I love it.







Why? Well there's nothing especially fantastic about it really, but it does do exactly what it says on the tin, which is to give you a game of backgammon – and a good one at that. The graphics are basic, but as good as you need them to be and the interface is extremely intuitive. Compare that with the much snazzier looking version I have on my mobile phone which I still haven't managed to get my head around in well over a year of owning the thing.

For me it's Backgammon's very simplicity which makes up its appeal. That and the fact that it's the perfect game to dip in and out of when you've other things to be getting on with and need the odd five minutes distraction.

Colin Woodcock

Graphics 60%
As good as they need to be

Sound N/A

Playability 84%
Very easy to get to grips with and hard to put down

Addictiveness 85%
This game will see you coming back for more, although I'm sure the Spectrum cheats!

Overall 85%
If only all Sinclair releases had been this good

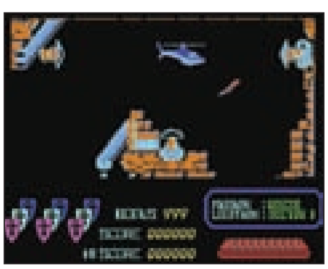
Airwolf

Hall of Shame

Publisher: Elite Systems
Year of release: 1985
Format: C64

At the time the hit series Airwolf was still fresh on TV and I was but a naive youngster with spare cash to spend. On hearing that a game of the TV series had been released, I rushed out to buy a copy. The packaging and box art were great, but upon loading the game everything went downhill. It was so bad I boxed it up and went to return it to the shop a few days later. Unfortunately the shop had gone bust, and to this





day I still have the game complete with the receipt!

Taking control of Airwolf, you had to navigate an underground cavern in search of some trapped buddies. To achieve this you had to fire at switches that opened doors to other areas. Sounds easy, except that it's impossible to hover! Plus, you can only shoot in the direction you are flying, and hitting the floor or another object damages your shield, which depletes all too quickly. And when you die you have to restart the game from the beginning!

To make matters worse, the game opens with an awful rendition of the Airwolf theme tune. And as the game plays, it's apparent that the 'SID orchestration' is taking its toll on the machine's processing power, with the C64 becoming hard pressed to even play beeps in time. Eventually, the music starts dropping a few beats as the screen gets more animated.

In short, the game just doesn't work. I don't like to criticise – the graphics are good and the idea was there – but how did it all go so wrong? And what happened to the gameplay?

Nigel Parker

Graphics 52%
A reasonable attempt, but nothing ground-breaking by any stretch of the imagination

Sound 35%
Poorly timed as it loses beats as the game plays

Playability 13%
I wonder if the programmers or play-testers understood this concept?

Addictiveness 15%
Too frustrating to bring you back to play it again

Overall 14%
Elite's first game, and easily its worst. Avoid it like the plague





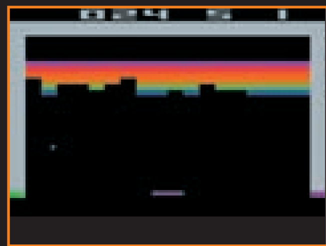





TV GAMING

Not a month goes by without a new plug-and-play TV console gracing the news pages of Retro Gamer. With the new Commodore 64 joystick recently launching in the US, we thought it was the perfect time to round up and review these battery-powered bundles of retro-gaming joy

Atari 10-in-1



Hardware: The Atari 2600 is one of the best-selling 8-bit consoles of all time. Obviously, then, there's a big market to exploit, hence the reason why there are so many mini-consoles based on the 2600. This particular incarnation really looks the part, being encapsulated in the classic one-button Atari joystick, yet the feel is more comfortable and user-friendly than the original controller.

Software: A total of 10 games have been pre-loaded onto the device, including faithfully emulated games such as Asteroids, Pong, Centipede, Missile Command and Yar's Revenge, many of which are considered classics for the 2600 and are recognisable names to retro fans. One game that's worthy of note is Gravitar, which takes the basic idea of Asteroids, adds gravity and mixes it up with clever static screens for you to navigate and enemy bases to destroy. Another is the classic Breakout – despite being a surprisingly difficult rendition of the game, there is something quite compelling about bouncing a ball (albeit a quarter-block here) against a brick wall. The game Real Sports Volleyball is an odd inclusion, as it is one that we're not familiar with. Atari Circus is probably the worst game of the bunch, but that said, there is more than a few hours of gaming to be had here.

Verdict: Most people will find something here that they will enjoy playing, be it Asteroids, Pong or Breakout. And for a more long-term challenge, there's always Adventure. If you don't own an Xbox or PS2 and can't get your hands on the recent Atari Anthology collection, this TV game really is perhaps the next best thing. (Available for £19.95 from **www.firebox.com**).

Activision 10-in-1



Hardware: This collection of 10 Activision games is housed inside a rather generic joystick design, although with its gear-shift design and black and silver styling, it closely resembles Suncom's TAC 2 controller. The TAC 2 was an one of the best third-party controllers available for the 2600, so it's an excellent choice. Our only complaint is that the ball at the top of the stick is made from shiny plastic – not great for sweaty-palmed gamers.

Software: What we've got here is 10 of Activision's best titles for the Atari 2600. Activision was without doubt the finest third-party publisher for the 2600, and its titles often eclipsed Atari's own efforts. This console is not so much a greatest hits package, as a collection of Activision's best early titles. Topping the bill is Pitfall!, David Crane's timeless platformer. It's been included on numerous compilations, and regularly turns up as a hidden extra in later Pitfall! games, but it's still a joy to play. River Raid adds heavyweight support to Pitfall Harry's star turn, and both Crackpots and Atlantis continue the shoot-em-up fun. The trio of sports games – Tennis, Ice Hockey and Boxing – are less successful, although Tennis is so damn manic it holds your attention for longer than it really should. Freeway, Spider Fighter and Grand Prix make up the 10.

Verdict: An excellent choice of controller and a healthy number of decent games, with Pitfall! and River Raid the stand-out titles. We suspect a second Activision 10-in-1 is in the works, hence the non-appearance of Pitfall II, H.E.R.O. and Decathalon. Still, there's plenty here to keep you entertained in the meantime. (Available for £19.95 from **www.boysstuff.co.uk**).

Namco Arcade Classics 1

Hardware: An odd choice of controller this. It certainly looks the part, with a bright, colourful exterior and an arcade-style stick and fire button. But the design is simply too chunky to comfortably hold in your hand. As a result you'll end up resting it between your knees, which is hardly the ideal solution. It's top heavy too, with all the weight at the front, causing it to tilt forward.

Software: OK, so the controller isn't great, but thankfully the selection of Namco arcade games go someway to making amends. Pac-Man is obviously the main attraction and needs absolutely no introduction, as it still manages to elicit delight from gamers of all ages. Galaxian, Namco's take on Space Invaders, is another stone-cold classic, with the swooping alien attacks still managing to test gaming vets. Dig Dug is a bizarre Boulderdash forerunner, with a cast of cute characters and over 250 rounds of tunnelling action. Slightly less well-known are Bosconian, a free-scrolling space shooter, and Rally-X, a fast-paced maze game in which you collect flags while avoiding maniac drivers. Both are welcome additions to a small but solid collection of games. As far as we can tell, emulation is more or less entirely accurate.

Verdict: With just five games in total you can't help feeling that Namco Classics 1 loses out in the value for money stakes. Other TV games offer more and retail at the same price, so unless popping pills Pac-Man style is a particular penchant of yours, you'd be advised to consider some of the more recent alternatives. (Available for £24.95 from **www.firebox.com**).



Namco Arcade Classics 2

Hardware: This second Namco Arcade collection again features super colourful styling. We wouldn't go as far as to say it was cheap-looking, but it's certainly childish, making us wonder who it's really aimed at. Thankfully, improvements have been made to the design, so it's better than that of the original and fits snugly within your hands. The stick itself has been enhanced too, with a new twist control method in addition to the standard four-way movement. The design has been introduced specially for Pole Position, and while it will never come close to using a proper steering wheel, it's an effective compromise.

Software: Again, five great Namco games from the early 80s. The aforementioned Pole Position features 3D graphics, would you believe, and makes use of the controller's second fire button for switching gears. The vertical-scrolling shoot-em-up Xevious also uses the additional fire button, allowing you to alternate your attacks between guns and bombs. Other games in the collection include Mappy, a frantic platformer involving thieving cats and law-abiding mice (?!), and Galaga, the intense shoot-em-up sequel to Galaxian. But stealing the show once again is Pac-Man, or at least his bow-wearing bride. Ms. Pac-Man is arguably a superior sequel, with smarter, faster ghosts fuelling a tougher challenge.

Verdict: Another fine selection of games, including the fantastic Ms. Pac-Man and Pole Position (which benefits greatly from the twisting-stick controller). As with the first Namco Classic collection, five games seems a bit stingy. We would have loved to see all 10 Namco games packed inside one controller. (Available for £24.95 from **www.firebox.com**).



Intellivision 25-in-1



Hardware: This TV game is based on the world's first 16-bit games console, the Intellivision, which was more popular in America than in the UK and Europe. It comes packaged in a sleek metallic blue controller with a modern look and feel to it. The well-known Intellivision logo (the running man) is proudly displayed, though the features of the original hardware aren't included on the device. So that's the controller, but what about the games?

Software: The device almost faithfully recreates games that fans of the Intellivision will recognise. With 25 titles, the system is trying hard to pack in some value, though many of the games lack a certain depth, and shallow gameplay and simplistic graphics are also noticeable. Worse still, some titles are not emulated 100% successfully, with noticeable glitches even to the untrained eye. There are a handful of great games here though. Most notable of these are Space Armada, an enjoyable Space Invaders clone, and AstroSmash, which is best described as a mixture of Space Invaders and Asteroids, though it's more like the traditional left-right shoot-em-up that the open arena of Asteroids. Possibly the poorest inclusion is Skiing.

Verdict: Intellivision fans will certainly get that feeling of nostalgia. The graphics have been replicated well enough, as has the audio, though the device sadly doesn't contain the features of the original controller. With 25 games it certainly represents value for money, but as many of the titles are largely unknown, general retro gamers would be advised to steer clear. (Available for £19.99 from **www.amazon.co.uk**).

Space Invaders



Hardware: One of the most universally recognised games in the world is Space Invaders, the game that spawned the shoot-em-up genre and gave birth to millions of clones. This TV game is designed around the classic arcade controller and has a symmetrical layout for both left- and right-handed players. Our only complaints are that the design is overly bulky, and the button have a weird spongy feel to them.

Software: Judging from the packaging, you'd be forgiven for thinking that you were getting the complete Space Invaders collection, from the original 1978 arcade classic to the 1980 sequel and the later revisions. That would make an excellent collection of games, showing the evolution of Taito's long-running series. Instead, you get a dodgy cloned version of Space Invaders plus four other Taito arcade games – Phoenix, Colony 7, Lunar Rescue and Qix. Of the four Phoenix is the most obvious inclusion, as it takes the basic Space Invaders formula and ups the ante 10 fold, introducing aggressive aliens and assorted attack waves. Colony 7 is another great shooter, and one we spent a few hours on. Lunar Colony is basically a timing exercise, while Qix is an abstract puzzle classic that doesn't really belong in this collection.

Verdict: A good collection of games that offer variety, even though at first glance it looks like you're getting Space Invaders and its sequels. With just five games, it's certainly not the best value TV game available, but then again, when you consider how many 10 pence pieces you probably pumped into Space Invaders over the years, it actually seems quite reasonable! (Available for £24.95 from **www.firebox.com**).

Sega Megadrive

Hardware: Sega's major success in the home console market was, and still is a favourite of gaming fans around the world. The Megadrive was not only powerful, but was swamped with a huge collection of games, many of which became all-time classics. The Arcade Legends hardware successfully emulates the feel of the MD with the authentic chunky three-button controller. This feels exactly like the original pad, and even the main power unit resembles a tiny little Megadrive.

Software: Six games are included – Altered Beast, Golden Axe, Kid Chameleon, Flicky, Dr Robotnik's Mean Bean Machine and, of course, Sonic the Hedgehog. No introduction is needed to Sonic really, and like the other games in the package, this is emulated via the unit to perfection. It plays at full speed, and looks and sounds identical to the original. It should also be noted that original cheats and codes also work in these games. The other games are all enjoyable additions, especially the insanely addictive Mean Bean Machine. But we have to wonder about a couple of the inclusions, which don't really fit in. Although Golden Axe isn't much fun in single-player mode, it's a classic all the same – Altered Beast on the other hand is just plain poor. Kid Chameleon is undoubtedly a great game, but is a rather low-key title to be included here, as is Flicky. We'd rather have seen such gems as Shining Force or Streets of Rage.

Verdict: The feel of the Megadrive is instantly apparent when you pick up the pad, and to all intents and purposes it *is* a Megadrive. Sadly though, there's no option to plug in a second controller, which damages the appeal of the two-player games. (Available for £24.95 from **www.firebox.com**).



Commodore 64DTV

Hardware: Based on the world's best-selling 8-bit home computer, the C64DTV (Direct to TV) is actually hardware-compatible with the original machine as it uses Jeri Ellsworth's 'C64 on a chip' design and idea, so it essentially looks and sounds just like the real thing. The casing itself is based on the Kempston Competition Pro, one of the best joysticks of the era.

Software: Manufacturer Tulip certainly hasn't been shy with the software included here, as the device holds 30 games, though the numbers have been massaged somewhat as two of the events from California Games have been included as separate games, rather than as part of one game. The C64DTV covers the early years of the C64 through to its commercial peak, with many Hewson and Epyx titles included. There is a good mix of classics alongside lesser-known games. Paradroid, a firm C64 favourite, is included, as are Speedball, Zynaps and both Impossible Mission games.

Verdict: Initially, the joystick feels a little poor, but you don't notice this when using it. The selection of games will please most of the C64 fans out there, including those who still dote over the machine, some of whom were initially sceptical about the device. Paradroid is perhaps the outstanding game, but that's down to personal taste. The C64DTV also has a secret mode that lets you program in CBM BASIC, as well as five mini-games for you to fine – a nice addition for those hardware hackers out there. The version we tested was the NTSC variant, and we've been informed that the PAL version, due out around Easter, may include a different selection of games. (NTSC version available for £29.99 from **www.gadgets.co.uk**).




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>Project Stella

It sold 30 million. It was commercially supported during three separate decades. It changed the face of gaming forever. And it had a woodgrain finish that s been the envy of every console since. It could only be the Atari 2600, grandaddy to them all. Peter Latimer charts the console s illustrious history, and chats to famed game developer David Crane

Mid 70s' gaming was dominated by one-game consoles. Invariably, they played Pong or perhaps something which sounded much grander, but was still pretty much Pong. Companies like Maganox tried a multi-game machine as early as 1972, but a console which required players to keep score on paper and needed physical playing cards and dice was never likely to change the world – that task was going to need something a little more impressive.

Atari had done well with its one-game consoles but the problem was that people had to buy a whole new machine every time they wanted to play a different game, giving each console an unreasonably short shelf-life. What, Atari wondered, if a console could play loads of different games? Perhaps as many as 10?

In 1976, and with this firmly in mind, Atari designers Steve Meyer, Joe Decuir and Harold Lee began work on ‘Project Stella’ (named after, of all things, Joe’s bicycle). They were planning a super-console with 10 distinct games built-in via an internal ROM slot, all ready to run. However, the rival Fairchild Channel F system inspired a crucial design change – putting the ROM slot on the outside. That way one game could be bundled with the console, with people buying the others over the months ahead, perhaps prolonging the console’s shelf-life to as much as three years. It wasn’t much more than an afterthought, but that change came to define how people would think of videogames for decades to come. The finished console was named the Atari CX2600 VCS (usually known simply as the Atari VCS until 1982 when it was officially renamed Atari 2600), and with an initial production run of 400,000 it was ready to take on the world.

The Heavy Sixer

Due to legal wrangles, the 2600’s first incarnation was delayed until October 1977, but when it arrived, it arrived in style. Nicknamed ‘The Heavy Sixer’, because it was fairly weighty and adorned with six chrome-like switches (late models featured just four switches), it sported a sleek woodgrain finish.

It looks a little strange now, but that woodgrain finish was no accident; it was the embodiment of Atari’s marketing strategy. It knew exactly where it wanted its console to fit into people’s lives. It wasn’t a toy for the kids’ room or some kind of electronic curiosity; it was the future of home entertainment and needed to look like it belonged in people’s living rooms. Since woodgrain was the finish of choice for TVs and stereos in the 70s, it was a natural choice for the Atari.

Most of the Heavy Sixer’s extra weight came from substantial internal metal RF shielding, allowing for a superior picture from this earliest model. Also adding to the bulk was extra-thick plastic on the unit’s back and sides which was later removed to give the console a more streamlined look. The six switches controlled the power, toggled between palettes suited to colour or back and white TVs, chose the game variation, reset the game and allowed each player’s difficulty level to be set independently (in 1980 these difficulty switches were moved around the back). As well as selling the console under its own brand, Atari licensed it to Sears where it debuted as the Sears Video Arcade. Sears later updated the casing and renamed it the Video Arcade II, but it was still a 2600 inside.



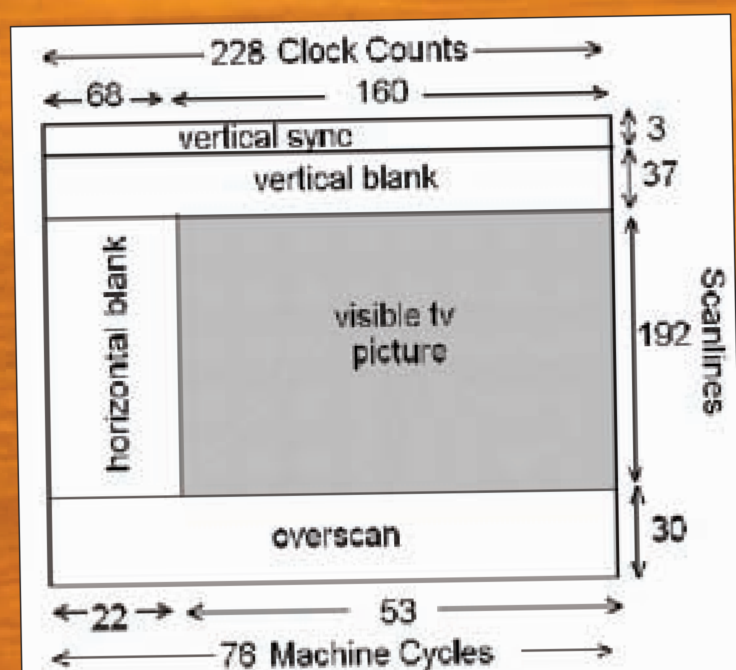
The original ‘Heavy Sixer model, and the later revision with just four switches and no woodgrain veneer

>Behind the woodgrain

The 2600 was certainly no powerhouse of technology. It was powered by a stripped-down version of the 6502 CPU running at 1.19MHz, with sound and graphics taken care of by a 3.5MHz chip allowing a resolution of 160x200 in 128 colours. It had only 128 bytes of RAM, with cartridges tending to be 4KB in size. The 2600 had no luxuries, not even screen memory. David Crane and homebrew programmer Kirk Israel helped us understand what it takes to be a late 70s-style games developer. Unfortunately, you need more than flares and huge sideburns.

Programming a 2600 is low level all the way. Before starting, you might want to rip the back off your TV and look inside because you’re going to need to know a lot about how that thing works. To vastly oversimplify, a TV creates a picture by scanning a beam across the screen from left to right, top to bottom, one line at a time. To display an image the beam needs to be set appropriately at every point. This is relevant because the 2600 has so little memory that each part of the image is processed as the beam moves. Your game needs to know the beam’s location at all times, passing it the right data for the current position to gradually build each frame. In fact, the program cycle is so intimately connected to the TV’s beam that keeping the two synchronised takes up 80% of processing time, meaning that the only time available for figuring out what your game’s doing is while nothing is being drawn, which isn’t very often.

The 2600 hardware was designed to play games in the style of its original bundled title, Combat. The limits are two player characters, two missiles, a ‘ball’ of some kind, and a backdrop. If you need anything more than that then you’re straight into crazy programming tricks. It’s not pretty, but it’s not impossible, and generations of programmers have come up with multitudes of ways to get more from the 2600 than its designers imagined possible.



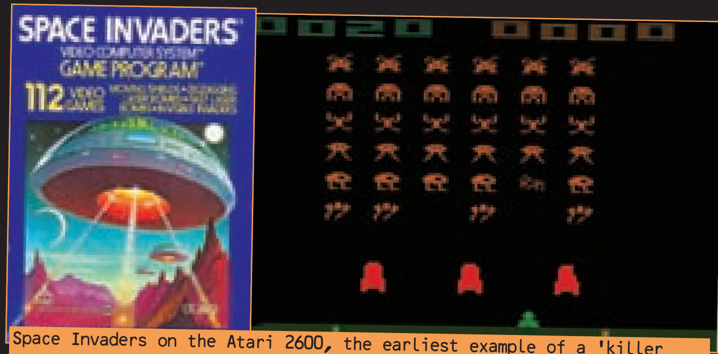
Did you get all that? Maybe this diagram will help? Then again, maybe not...

In the box, alongside the console, you could expect to find the game Combat, paddle-style controllers for games like Breakout, and two of Atari's original joysticks which were usefully adorned with the word 'top' in case people didn't know which way to hold them. It was a £200 package of pure gaming, but even then it was no technical breakthrough. Most of the technology came straight out of existing Atari consoles and Peter Engelbrite, author of some its most impressive games, describes the 2600 as the absolute minimum conceivable hardware which still provided some functionality; a Turing machine for games. Still, its versatility and superior games gave it a huge advantage over the competition. But nowhere near enough people cared.

Finding the killer

Following the arcade sensation that was Pong, countless companies had jumped on the videogames bandwagon and by the time the 2600 hit the streets, there were too many products chasing a rapidly diminishing market. Most people believed that videogames were all like Pong, which by now had become old and boring. Home videogames seemed to be going the way of Spacehoppers – a must-have item for a while, but now distinctly uncool. One by one Atari's competitors disappeared and though the reduction in competition kept the 2600 alive, its future didn't look bright. What it needed was a game with a real wow factor, one that would stun the world as much as Pong had a few years ago. What it needed was Space Invaders.

In a moment of brilliance Atari's Ray Kassar negotiated exclusive rights to release a home version of the 1978 arcade smash that was conquering the world, and finally the console had its killer game. Space Invaders did for the 2600 what Tetris did for the GameBoy. The original 2600 production run sold out in no time and by the end of 1980, Atari had sold more than two million in the US alone. And once people had bought the console they discovered there was more to the 2600 than just Space Invaders. Gaming was back, bigger than ever, and all that mattered was Atari's 2600.



Space Invaders on the Atari 2600, the earliest example of a 'killer app'

Crash and burn

Although hugely successful, by 1982 the 2600 was looking primitive beside systems like the ColecoVision and Atari knew it needed to move with the times. It unveiled the Atari 5200 as a successor to the 2600 but neglected to make it backwards compatible, so most people still opted for a 2600 just because there were so many great games. Even worse, Atari wouldn't let go of the 2600 and continued to market it as much as the new machine. As a result, the 5200 never quite emerged from the 2600's shadow, and although Atari was still on top, its star console was now behind the times. 1982 was also the year the 2600 lost its woodgrain finish; a bad omen surely...

Around the time of the 5200's release, the videogame craze reached its height with more and more companies wanting a piece of the action. Every outfit from Kool-Aid to Quaker Oats had a games division and the consensus seemed to be that if you put any old tripe in a cartridge people would still buy it. At times Atari was as guilty as anyone. After the runaway success of Space Invaders, it believed it simply couldn't go

Tricking the 2600

For a quick taste of the lengths people had to go to, let's do another vast over-simplification on just one trick of the hundreds used, something as seemingly simple as displaying six players at once, remembering that players are any on-screen character, not just the human-controlled ones. In short, it's impossible. Your 2600 will laugh and say "You can have two, and that's my final offer." So you need to mess with its mind and take advantage of that whole synchronised-with-the-TV business.

After ensuring your game logic doesn't allow any players to ever be at quite the same vertical level, you wait until the beam's finished drawing the first one and tell the 2600 "My mistake! That player's not really up there, it's down here." The Atari obligingly begins to re-draw it in the new position, but the original doesn't vanish from your TV because the beam wont hit that part of the screen again until the next frame. So even though your Atari thinks there's just one player so far, the TV screen is already showing two. Now you do the same for the third one – tell the 2600 "Actually, when I said that guy was down here, I got it wrong again again! He's really over here." And so it goes until all six are accounted for, remembering to make sure the 2600's back to drawing the original player in time for the next frame. And this has to be done dozens of times each second!

It's not all bad though, as the 2600 did have a couple of nifty features which helped programmers write impressive games. For one, it was very unusual to find such a beautiful array of colours on a system of that era, allowing programmers to create the lovely rainbows and sunsets seen in many games. For another, the close relationship to the TV meant games tended to be very fast and responsive by nature, often running at 60 frames per second. Of course, some people might say those features are no big deal when you're being forced to use the same player object to represent 20 different things simultaneously. But such people probably do something easier for a living, like brain surgery.



The AtariAge website (www.atariage.com) features a page of useful 2600 programming links

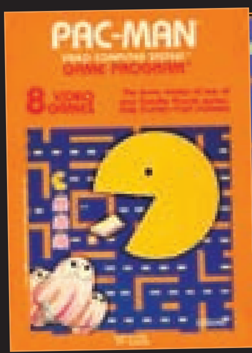
The 2600 was more than most programmers could stomach. Yet a few hobbyists still chase that moment when they see their game running on a TV screen and know they've achieved something almost nobody else could do. Some people climb Everest. Some swim across the English Channel. And some write Atari 2600 games. It's not physically demanding or glamorous. But master the 2600 and you've shown skill and endurance by the bucket-load.

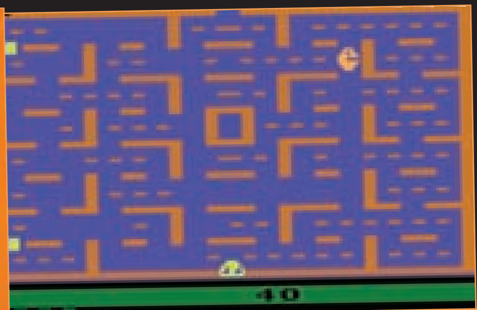
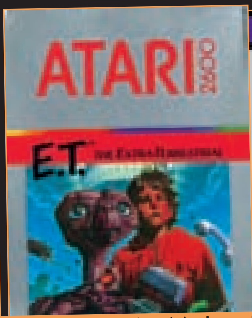


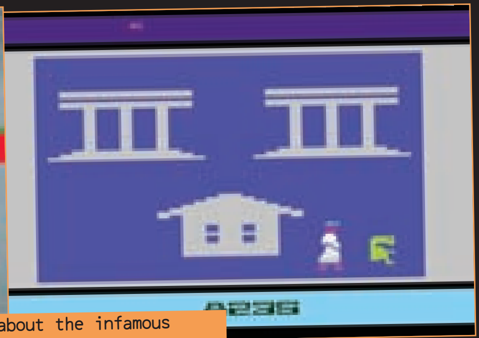
The 5200 failed largely because it wasn t compatible with the huge 2600 back catalogue, although a VCS adapter was later released

wrong with a big name like Pac-Man. But it did. Instead of developing the game properly it took an unfinished prototype and put it on sale long before it was ready. People had been expecting the incredible game they'd played in the arcades and felt conned by this poor imitation with terrible flickery graphics and substandard gameplay. Atari had expected to sell 20 million, but managed just 13 million and for the first time people realised that a great arcade game didn't guarantee a great console game. With too many companies releasing too many poor titles, people began to think twice before buying. The bubble was bursting, and at the end of 1982 the world's favourite extra-terrestrial delivered the death blow.

Atari had paid so much for the rights to create a 2600 game based on the movie *E.T.* that it needed to sell 25 million copies to make a worthwhile profit. Desperate for a pre-Christmas release, Atari asked Howard Scott Warshaw to write it from start to finish in less than six weeks. He was a talented programmer but not a miracle worker, and the resulting game was widely considered to be one of the worst ever created, selling just 1 million copies. The only useful purpose Atari ever found for the huge number left over was as landfill in New Mexico, alongside plenty of Pac-Man cartridges. Since it had fallen behind in the graphics and sound departments, if the 2600



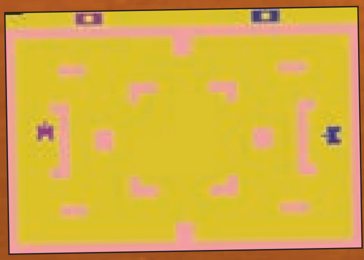





High-profile failures like Pac-Man and, in particular, E.T. helped bring about the infamous

>The top 2600 titles

With around a thousand titles to choose from, no two people will quite agree on which are the best 2600 games, but these few are definitely worth a look



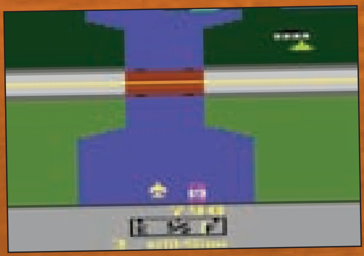
Combat – Atari, 1977
Bundled with the original 2600, this is two-player action all the way with tanks, planes and bouncing bullets. Where else can you play a tank game where both you and your opponent are invisible most of the time? Nowhere else but in Combat, one of the first and one of the best.



Kaboom – Activision, 1981
The premise of a suspicious-looking man dropping an endless stream of bombs, which you must catch is fairly bizarre. But thankfully there's no time to think about that as you dart left and right in sheer desperation in one of the simplest, fastest-moving games ever created.



Pitfall! – Activision, 1982
Only a handful of games spawn their own genre. Pitfall! is one of them – every platformer has its roots right here. It's up to you to guide Pitfall Harry through 255 screens of jungle where you'll encounter snakes, quicksand, crocodiles and more, plus you've only got 20 minutes to do it!



River Raid – Activision, 1982
A plane needs to be flown up a river. Where it's going, or why it's going there isn't clear. What *is* clear is that a lot of people are hell bent on stopping it in this frantic mix of dodging the landscape and shooting everything else. Few of the countless vertical shooters since play this well.



Jungle Hunt – Atari, 1982
Your girlfriend's been kidnapped by cannibals. It's not quite dinner time yet though, giving you just long enough to swing through vines, swim a lake of crocodiles, survive a strangely horizontal avalanche and defeat the cannibals. So maybe the crocodiles look like clothes pegs, and perhaps some of the boulders are somewhat square, but when you've got four completely different, equally fun styles of play going on, who cares?

couldn't offer good playability any more, it couldn't offer anything.

A glimmer of hope came in 1983 when Nintendo invited Atari to become the US distributor for its new console. A deal was very nearly reached to sell what became known as the 'NES' under the Atari brand, but internal problems at Atari caused it to collapse at the last minute (rumours suggest, however, that the deal actually broke down when an irate Atari employee swore at one of the Nintendo guys during negotiations). The 2600 was once again left as Atari's leading product, but nobody was excited any more. After the poor sales of Pac-Man and the disastrous E.T., many stores had had enough. They cancelled all videogame orders, not just those for 2600 titles, and cleared existing stocks at huge losses. The arrival of powerful, affordable home computers wasn't helping either. Not only did computers often have better games, but they could educate the kids, balance your finances, play Global Thermonuclear War, and so much more. Nobody wanted consoles any more.

While most of its competitors pulled out of the market altogether, Atari tried to keep the 2600 alive by dropping it to a quarter of its original price. But it couldn't stop the decline and by 1984 the industry was considered dead. Gaming's golden age was over.

The fun is back

To everyone's surprise, the 2600 wasn't discontinued. Rather than can it, Atari decided to redevelop it with a smaller, sleeker casing. Titled Atari 2600 Jr, it was to be relaunched alongside a new, next generation console, the Atari 7800, under the slogan 'The Fun is Back'. But the fun wasn't back. The fun was instead mothballed by Atari's new owners, the Tramiel family, who had no interest in the dead console market.

Despite the doom and gloom, Nintendo launched the NES in the US on its own and it turned out to be 1985's big success story. Sega followed that success with the 1986 debut of its Master System. Consoles were clearly back. Finally realising this, Atari rushed the 2600 Jr and the new 7800 console to the shelves. While the 7800 would have been a technical sensation in 1984, by 1986 it had lost its edge, and with few titles to capture the public's imagination, it never really got off the ground. And the 2600 Jr? The new look and low price of just £49 couldn't hide the fact that it was still the same archaic technology. Atari was now running a poor third in an industry it had owned three years ago, and the 2600's days were numbered. With Atari firmly focused on computers (the impressive ST line was primed for launch), the once mighty 2600 slowly faded into obscurity, with very young children now its only serious audience. To all but a few, the fun was gone.



As Sony has done in recent years with its PlayStation consoles, Atari released a smaller, sleeker version of the 2600

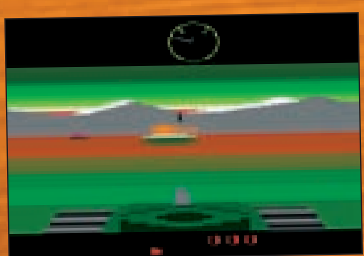
Game over

Somewhat surprisingly, the production of the 2600 didn't completely halt until 1989, well over a decade after the initial release, and having sold over 30 million units worldwide. In an attempt to clear old stocks Atari quietly reintroduced it to Europe one last time in 1991 with 128 games built-in. It could still be found on the shelves of major stores in 1992, and games were still widely available until 1994. It had taken 18 years for the console Atari had intended to last just two or three to finally be considered completely commercially dead.

The Atari 2600 wasn't quite the first of its kind and it was never state of the art, but it had two huge assets – its extraordinary versatility, and some hugely talented game designers who knew not only how to stretch its limited hardware, but how to make great games. It was also the first console to bring high-quality gaming into the home. With a long legacy including some of the finest games ever created, it's the console that kept on giving and even today it survives in countless nostalgic plug-and-play TV systems. No other console has enjoyed the longevity of the Atari 2600 and, chances are, none ever will.



The legend lives on! This new collection for the Xbox contains over 65 Atari 2600 games



Battlezone – Atari, 1983
You catch a glimpse of an enemy tank in the distance. He hasn't seen you, so you advance towards him. But just as you're closing in, he suddenly spins round to face you. Only one of you will survive... Presented in impressive 3D, with enemies attacking from all around you, it's as absorbing as they come.



Phoenix – Atari, 1983
What could be scarier than being attacked by a flock of evil birds? Being attacked by a flock of evil birds with missiles whose ability to fly isn't hampered in the least by having both wings shot off. With atmospheric sound and a huge flying saucer, it's one of the best shooters ever released.

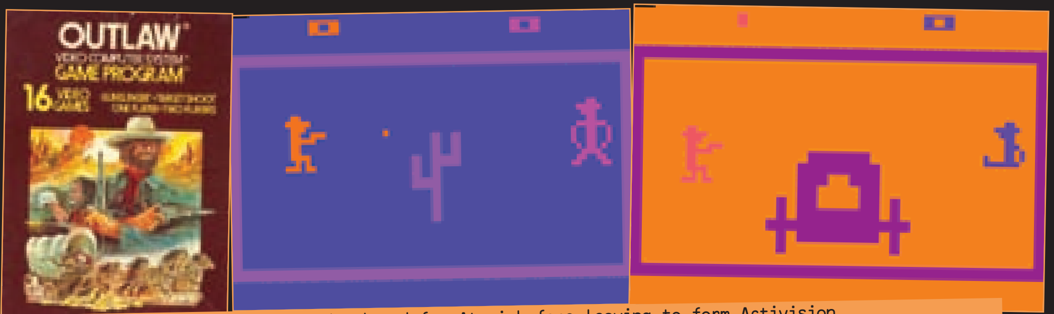


Winter Games – Epyx, 1987
The twilight years of the 2600 saw its hardware stretched to amazing lengths. Winter Games brought us incredibly smooth, detailed graphics and was all about technique – it wasn't how fast you waggled the stick, it was how you waggled it. Up to eight players compete over seven different sporting events, including slalom, ski-jump and speed skating. Winter Games is impressive and it's a shame that so few ever played it.

>David Crane interview

David Crane is a living legend. He was a founder of Activision and one of the original Atari 2600 programmers. Since striking gold with Pitfall!, his games have sold millions upon millions. Today he s Chief of Technology at Skyworks and showing no signs of slowing down. Somehow he found time to talk to Retro Gamer...





Outlaw was one of games Crane developed for Atari before leaving to form Activision

Retro Gamer: You left Atari during its most successful period to set up Activision. Why did you take such a risk?

David Crane: Two factors – recognition and compensation. Based on sales, it was clear that creating a fun game required a certain talent, and that designers with that talent made games that sold better. Games that sold better were more liked by the consumer – it's nice to receive recognition when someone really likes your work. When we discussed this with the president of Atari we were told, "You are no more important to that game than the person on the assembly line that puts it together." It was clear that there was a big disconnect between game designers and management. We left the next day. We never held ourselves up as 'bigger than the game', but it made as much sense to credit a game designer as it did to credit the author of a book – then people could choose to buy games from a particular designer if they liked his or her style.

RG: Can you tell us about your 2600 debut, Outlaw?

DC: Outlaw was a direct copy of an arcade game called Gunslinger. Atari's software department charter was to do home versions of successful arcade games. The company was in a hurry, so I worked extra hours and completed it in six months. At the time I was paid an annual salary of around $18,000. Outlaw sold more than 500,000 units so, for $9,000 in development costs, Atari probably grossed $10 million. Despite the primitive appearance, Outlaw was ahead of its time: it was the first game to combine two movable player objects with a modifiable bitmapped object – the 'shootable' cactus and stagecoach. As the art advanced, we learned how to process the display kernels more efficiently, yielding more detailed graphics in later games.

RG: Pitfall! is perhaps your best-loved 2600 title, but what would you say was your best technical achievement?

DC: I would have to say either Dragster or Freeway. Dragster was the first game to have a 32-pixel-wide moving object. That display technique was copied by hundreds of games. Freeway moved an object vertically through independently moving horizontal bands of objects. Doing this with a single object was considered insanely difficult. Moving two independent objects through the same horizontal bands was not even contemplated as possible. For years we would use that display technique as an example of how such an innocent-looking game could have required a program so complex that only a handful of people in the world could appreciate it.

RG: In 1984 someone said of you, "His recent games require as many as 4,000 separate instructions." Technology has moved on, but do today's games programmers have an easier time?

DC: Programming for the 2600 was probably harder because there were limitations in absolutely every area. The display was severely limited. You had 4KB for images and code, 128 bytes of RAM and almost non-existent sounds. Today's systems have limitations, but the programmer only pushes those limits by choice. With processors running thousands of times faster than the 2600 you can do almost anything. Today you can unleash a composer to create a score for an entire orchestra, and put that composition into the game with 64 orchestral instruments!

But it's still just as difficult to make a game fun. When we only had 4,096 bytes of program to write, we had more time to tweak the gameplay and it still shows after all these years. From



They may look simple, but games like Dragster and Freeway were only possible thanks to some seriously complex coding tricks

playing some modern games, I often feel the staff were so caught up in how many polygons they could squeeze out of the renderer that they didn't leave enough time to tweak the gameplay.

RG: Do you think the golden age of gaming is over?

DC: The business is always evolving, so nothing is ever 'over'. The difference between today and the 1980s is in the make-up of the target market. Look in the videogame aisles in your favourite store. There are two groups: boys ages 14 to 17 buying the latest top title, and boys under 14 buying last year's game at a reduced price. Where are the mothers, the fathers, the sisters, the grandmas? In the 1980s we made games that appealed to all ages.

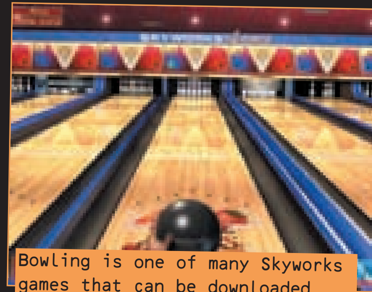
Today, games with that wider-range appeal can be found online; we call them 'Casual Games'. You play for a few minutes when you have a few minutes to kill. Casual games get none of the press, but get much more play than hardcore games. At Skyworks we have casual games played for 10-20 minutes at a time by 10-20 million players! The golden age of gaming is alive and well – just not necessarily in the videogame aisles.

RG: So what are you working on these days?

DC: At Skyworks we are the leader in what is called Advergaming – developing games sponsored by advertisers and placed on the Web. Skyworks develops the games, advertisers pay for the development, and you play the game for free! For examples, go to **www.candystand.com.**

We've also developed some pay-to-download games. These are games, much richer in content than free games, that you can download for a nominal fee and keep. For example, a bigger and better incarnation of my bowling game can be purchased at **www.skyworks.com**. Recently we've begun developing for cellphones. Most people carry their phone everywhere. It only makes sense for a person to play a game for a few minutes while waiting in line at the bank.

RG: How would you feel if someone at Skyworks suggested you go and write some new 2600 games?



Bowling is one of many Skyworks games that can be downloaded freely from Web

DC: That would be a lot of fun. While programming for the 2600 was extremely difficult, it was also one of the greatest challenges of my life. People do all sorts of puzzles to exercise that puzzle-solving part of the brain, but it's so much more enjoyable when you're solving puzzles in the course of a financially rewarding career. If there was a business in 2600 games I'd be there in a flash.

>Kirk Israel interview

It s been a long time since the 2600 was commercially viable, but that doesn t mean it s dead. In fact, there s a small but vibrant 'homebrew community still writing new 2600 games. We spoke to Kirk Israel about why he still loves the Atari and its gaming scene

Retro Gamer: Why, in 2005, would you still want to program a console from the 70s?

Kirk Israel: Atari programming is a labour of love and a bit of retro geek street cred. I've been an Atari fan for a long time and when I saw the homebrew game SCSIcide at Philly Classic [a US gaming event] it made me think "Maybe I could do this". It's a way of impressing the heck out of my youthful self, and there aren't many ways of making a game that can be played on a real TV.

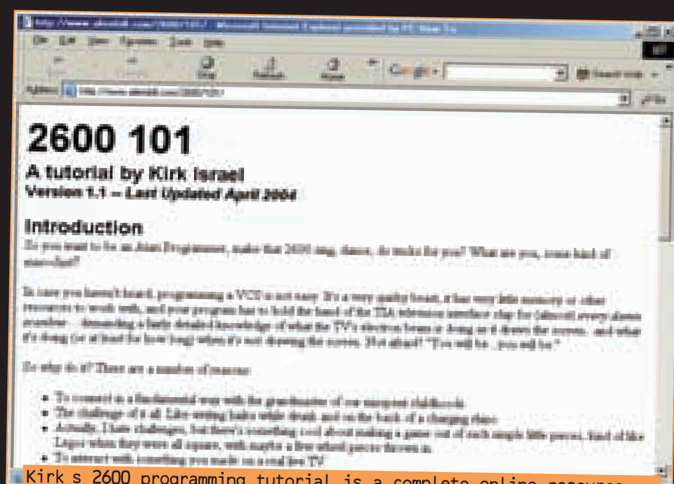
RG: You wrote '2600 101', a fun introduction to 2600 programming. Where did you get the idea?

KI: I'm very grateful for all the help the homebrew scene gives to up-and-coming programmers, and 2600 101 was my attempt to give something back. The community is pretty small, and a big chunk of the folks in it were doing this well before I was... but once in a while I'll get a note from someone who said they got their start with 2600 101.

RG: Can you tell us about your own 2600 game, originally called JoustPong?

KI: It got its start on a Usenet classic games group when someone asked about the future of gaming and a guy said it could be summed up in two words – Pong and Joust. That led to some chat on how the games could be combined and is where the idea was formed. It's sold about 70 copies – I worked with the website AtariAge to get the physical carts made. Without them JoustPong would probably have just been something to run on an emulator.

RG: You later changed your game's name to FlipPing. What was the problem?


2600 101
A tutorial by Kirk Israel
Version 1.1 – Last Updated April 2004
Introduction

Kirk s 2600 programming tutorial is a complete online resource, offering examples of working code

KI: Infogrames, the current owners of the Atari brand, thought that using the word 'Pong' infringed its copyright. I know companies have to defend their intellectual property, but still...

RG: If someone wants to see what people are doing with the 2600 today, where should they start?

KI: Go to **www.atariage.com** and do a cartridge search with 'Rarity' set to 'Homebrew'. My own JoustPong is there, along with some amazing feats like Thomas Jentzsch's port of Thrust and my homebrew inspiration, Joe Grand's SCSIcide. There's an AtariAge Forum just for discussion of homebrewing as well.

Gadgets & gizmos

The early 80s was a time of invention in videogames. With the Atari 2600 in its heyday, companies raced to build that revolutionary add-on which would change the way people played games, perhaps even how they lived. None quite managed that, but it wasn't for lack of trying...

One of the strangest was the Atari Mindlink. Advertised under the slogan "The State of the Art for the State of your Mind", it seemed like it could interface the 2600 directly with your brain. Unfortunately, a more accurate name would have been the Atari Eyebrow Link, because the kit consisted of a headband connected to the console by infrared which allowed you to control the on-screen action by twitching your eyebrows. Perhaps unsurprisingly, Atari eventually decided this wasn't something gamers were crying out for, and axed it.

Some companies chose to work on body rather than mind. People were already concerned that gaming was an unhealthy pastime, but Suncom reckoned it had a piece of genius to get gamers into shape. Its Aerobic Joystick claimed to interface with any standard exercise bike and add a revolutionary physical element to games. What it actually did was control the fire button – the faster you pedalled, the quicker you could fire. So, in Space Invaders, for example, you could shoot using a quick burst of pedal power.



Years before the release of the A1000, Amiga was

Amiga was just as determined to get you out of your chair and promised that its Joyboard would do just that. With the impressive claim 'Your whole body plays! You are in the game!', it invited you to set aside that dull old joystick and jump aboard for the ride of your life, using your body weight to rock the board, and thus, control the action.

But not everyone likes exercise. In fact, for some just holding the joystick was too strenuous, so Atari came up with The Voice Commander. As the name suggests, it would let you control games by shouting at them. Unfortunately, despite being advertised, it was never finished, so we'll never know how much fun Galaxians might have been if you'd had to shout 'fire' several times a second.

Some companies preferred to concentrate on better ways to get games into the 2600. The Gameline was a cartridge which connected your console over the phone to a games download service. It cost 10 cents per play, or £1 per hour, with everything for free on your birthday. Unfortunately, it never really took off.


Control the 2600? With nothing but your mind? Were Atari serious? Not entirely we suspect...

Supercharged

Starpath gave the world The Supercharger which increased the 2600's RAM from 128 bytes to 6,272 bytes. It said this led to games with superior graphics and gameplay. While there's no doubt that the Supercharger games were good, they were no better than the best of the ordinary ones. Its other major feature was the ability load games from tape instead of cartridge, opening the door to multiload games and effectively removing size limits from games. The Supercharger was well received, but too late to cash in on the 2600's boom years.

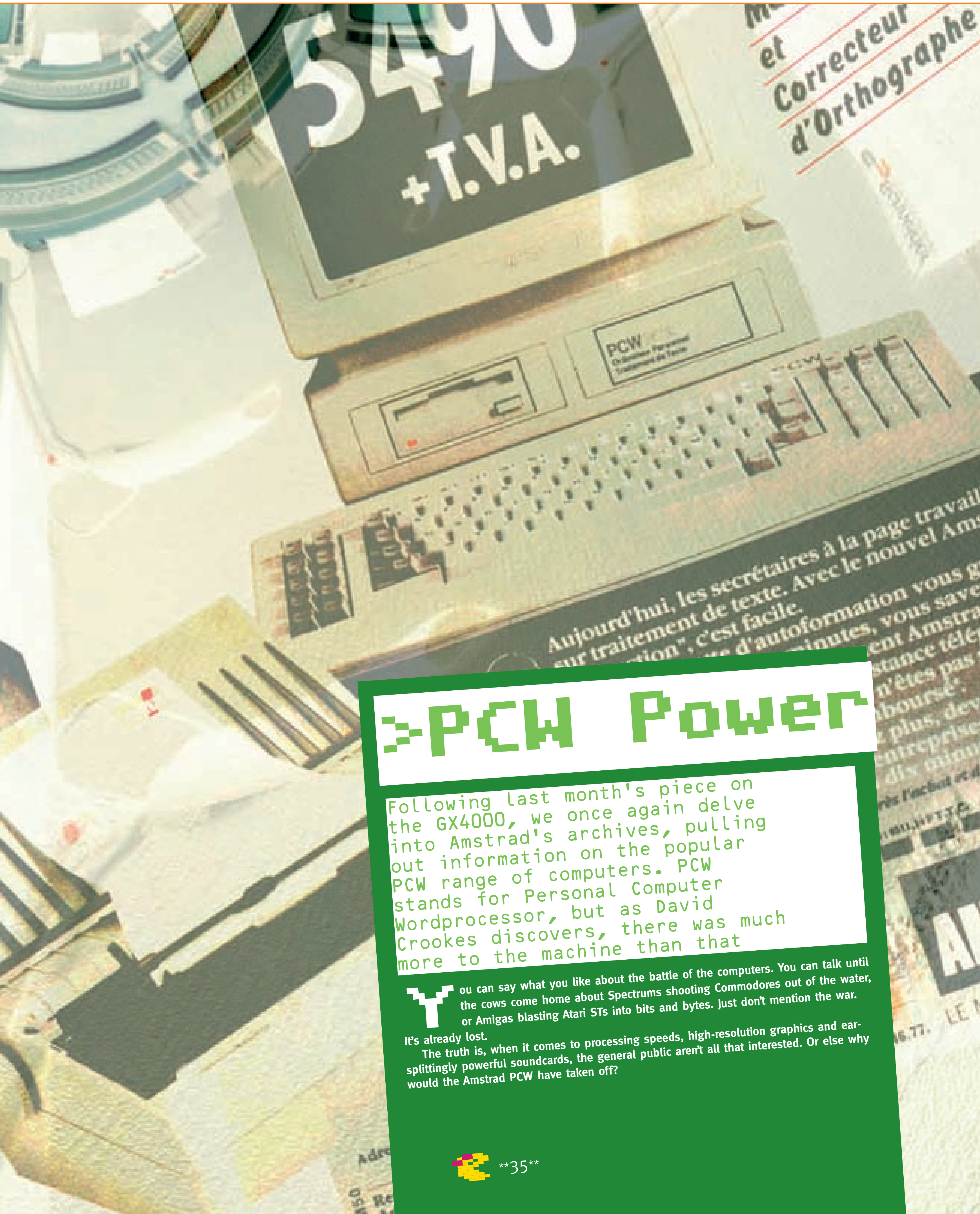
Amiga's Power Module also connected your 2600 to a tape recorder but, more impressively, allowed you to connect to another 2600 over the phone for online play. Great as that sounds, Amiga didn't think it was quite enough to sell its product – it knew it was a tough market and needed something extra to put it in a class of its own. So it threw in a pair of 3D glasses.

Some of the more recent innovations in gaming are the very ideas which flopped in the early 80s. Admittedly, some flopped because the reality didn't live up to the claims, but even the good ones were often ignored. Videogames themselves were still quite novel, so there was no need for expensive toys to create that 'wow' factor – a simple joystick was enough. Now though, in the era of EyeToys and dance mats it seems that we're finally ready for a little innovation. The PlayStation Mind Link surely can't be far away... RG*


Starpath s Supercharger plugged into the 2600 s cartridge port and pumped the system with additional memory, allowing for enhanced games

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>PCW Power

Following last month's piece on the GX4000, we once again delve into Amstrad's archives, pulling out information on the popular PCW range of computers. PCW stands for Personal Computer Wordprocessor, but as David Crookes discovers, there was much more to the machine than that

You can say what you like about the battle of the computers. You can talk until the cows come home about Spectrums shooting Commodores out of the water, or Amigas blasting Atari STs into bits and bytes. Just don't mention the war. It's already lost.

The truth is, when it comes to processing speeds, high-resolution graphics and ear-splittingly powerful soundcards, the general public aren't all that interested. Or else why would the Amstrad PCW have taken off?

At the time of the PCW's inception, the Spectrum, Commodore and Amstrad CPC computers were making real inroads into people's homes. They were wowing anyone who saw their graphical capabilities and their wonderful games. And they were being seized upon by youngsters who told their parents about all the great educational benefits of owning one.

Yet here was the Amstrad PCW. It looked smart and came bundled with a monitor, printer and a dedicated keyboard with cut, copy, paste and print keys. But the monitor sported a green screen and the machine was marketed on the basis that it could do one thing: word process.

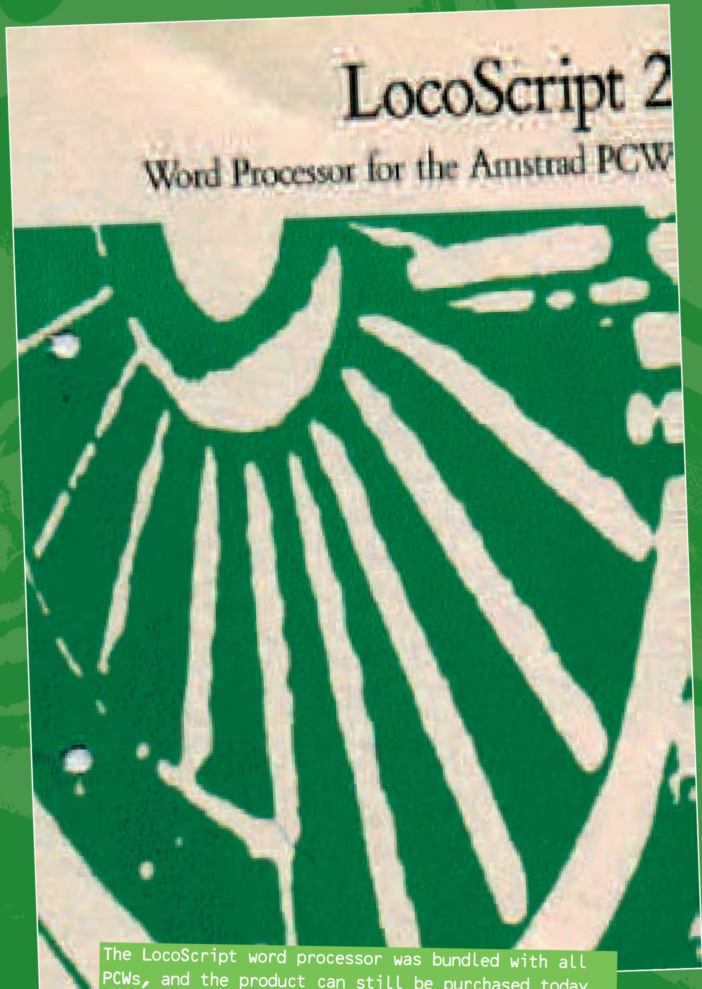
Now it's easy to dismiss the PCW as a one-trick pony. But it wasn't. It was much more than that. It fell neatly into Amstrad boss Sir Alan Sugar's philosophy that if you make something cheap and simple enough, people will buy it. The PCW provided an affordable alternative to clunky typewriters and expensive PCs, and was installed into offices, schools and also homes. In fact, the PCW was extremely popular, with 700,000 sold after just two years, and total sales notching 2.5 million.

Going Loco

When considering the CPC, Amstrad originally wanted to design something similar to a Commodore 64, based around a 6502 processor, and commissioned a design team to work on the hardware and software. Yet as time passed, it became clear the team would never meet their delivery deadlines, so Amstrad went in pursuit of someone who could help dig it out of a hole.

That someone was Roland Perry. Amstrad asked Perry if he could put together a design, and Locomotive Software was instructed to program the software. Locomotive already had a BASIC interpreter, but it was designed to work with a Z80 processor, so Amstrad scrapped the 6502 idea and decided to base the CPC around the trusty Zilog chip.

The CPC was an immediate success across Europe, stealing considerable sales from both Sinclair and Commodore. Although initially marketed as a computer for both the home and



The LocoScript word processor was bundled with all PCWs, and the product can still be purchased today from www.locoscript.com

>Green-screen gaming

The PCW was marketed as a word processor, but unsurprisingly other application software was written for the machine. Somewhat more surprising is the small catalogue of games released for the system.

Despite similar hardware, the PCW rarely benefited from CPC ports. "In general very few games were ported from the CPC because of the vast difference in colour and graphics," says Steve Denson, owner of SD Microsystems, a company which continues to sell PCW software. "The PCW was regarded as a home and business computer and not a games machine, so games did not sell so well. And those which did were mostly of the thoughtful variety – mind games such as chess."

Of those 'mind games', text adventures were perhaps the most popular, which was to be expected considering the PCW was optimised for displaying text. Big players including Level 9 and Infocom swooped on the PCW, although all of their releases were adapted from other machines and ported over.

"Most PCW games originated from earlier formats," says PCW expert John King. "It is possible that some of the text adventure games were issued solely for the PCW, but even then they weren't proper commercial releases. The very rare game Myth was issued exclusively for the PCW, but you had to be a member of the Magnetic Scrolls' club to buy it. It was never issued through retail outlets."

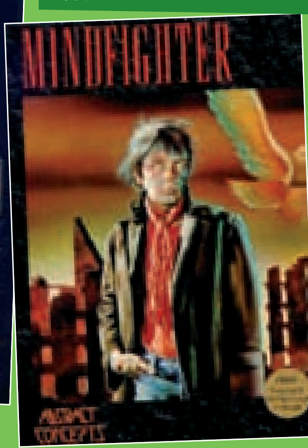


Level 9 was one of the few publishers who released games for the PCW

Infocom ported its Enchanter Trilogy to the PCW (although only Enchanter and Sorceror made it – Spellbreaker, the third in the series, did not). The Enchanter, by Marc Blank and Dave Lebling, had the player battling to over ome the wicked power of the Warlock, while Sorceror, by Steve Meretzky, had the player rescuing the kingdom. Both games proved popular and PCW users were treated to two other Meretzky classics, Planetfall and The Hitch-Hikers Guide To The Galaxy, the latter co-written with Douglas Adams. Suspect and Lurking Horror were Infocom's PCW offerings.

Level 9 released three of its popular adventure trilogies on the PCW – The Middle-Earth Trilogy (Colossal Adventure, Adventure Quest and Dungeon Adventure), The Silicon Dreams Trilogy (Snowball, Return to Eden, The Worm in Paradise), and The Time and Magik Trilogy (Lords of Time, Red Moon and The Price of Magik).

Mindfighter from Abstract Concepts came complete with a 150-page scene-setting novel



office, and CPC was generally adopted as a gaming platform. So when Locomotive said it could create a dedicated word processing package, Amstrad seized on the opportunity and the PCW was created. The machine was again based around the Z80 processor, but with much more RAM (256KB compared to the CPC464's 64KB) and the screen memory was optimised for displaying text. The CPC had an 80x25 character display, whereas the PCW boasted 90x32, allowing room for the text document and surrounding program options.

Cliff Lawson, who has worked at Amstrad for over 20 years and was part of the PCW launch team, accredits the PCW's success to it being an all-in-one package. "Part of what made the PCW so successful was that it was a complete solution. There was nothing else to buy apart from a pack of A4 paper."

Open range

The PCW8256 was launched in 1985, the same year as both the CPC664 and CPC6128, and retailed at £399, making it cheapest word processing system available. The machine operated under CP/M+, a command line operating system similar to DOS, and benefited from some solid application software. Besides the powerful LocoScript word processor software that came bundled with the PCW, spreadsheet and design packages were also available.

Like the Apple Macintosh, the PCW housed all the hardware inside the monitor case, including a 3in 180KB floppy disk drive (with a slot for an optional second drive). The keyboard and printer plugged into the monitor and the whole system ran off a single power supply. Firing up the system was as simple as flicking the power switch and inserting either the LocoScript or CP/M+ floppy disk.

The printer was on the slow side (90 characters per second in draft mode and 20 characters per second in letter-quality mode), and you'd need to buy a special interface if you wanted to connect a third-party printer. Perhaps the biggest drawback, however, was the lack of memory. 256KB was a generous amount back in 1985, but LocoScript struggled when handling large documents.



Amstrad PCW16 came with six built-in applications, all accessible through the Roseanne GUI

Unsurprisingly, Amstrad released the 8512 shortly after, with double the amount of RAM and two floppy drives as standard (strangely, drive B was able to read and write 720KB while drive A was still limited to 180KB).

The 8256/8512 models were superseded by the PCW9512 in 1987, and it was this £499 machine that made great strides into the corporate sector. In typical Amstrad style, the hardware inside was exactly the same. The screen was still monochrome (although now white on black rather then green on black) and the 3in drives were retained (but both were now 720KB drives). However, the casing was redesigned to look more business-like – the drives were now beneath the monitor – and the printer was upgraded. Software-wise, an updated version of LocoScript was included which benefited from several new features, including spell-checking and mail merge options.

In 1991, the PCW9256 became available as a cut-down version of the 9512, with half the memory (256KB) but with a 3.5in disk drive. And the PCW9512+ replaced the 9512, again with the addition of the 3.5in drive that had become increasingly standard. The 3in discs were

Later on, Level 9 created a new game engine called KAOS. The games were smaller but featured 'intelligent characters', and of these Lancelot and Scapeghost received PCW outings.

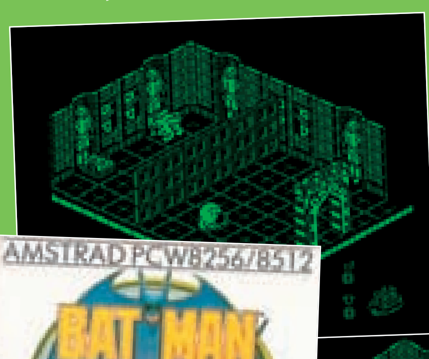
Games for grown-ups

Abstract Concepts created the adventure game Mindfighter, which was distributed by Activision in 1988. Written by Anna Popkess and Ferguss McNeill, it was a deep game about an 11-year-old boy who had become withdrawn due to nightmares and visions which had shattered his life during the Gulf crisis. It was typical of the more mature games offered to PCW buyers.

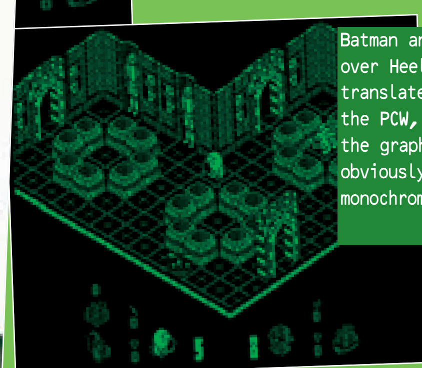
Another was Crusoe, a split-screen game written by Jonathan Smith and released only on the PCW and Spectrum. The player typed in commands at the bottom of the screen such as 'pick', 'drop' and 'look' and saw the action take place on map grid of squares in the upper window. "I think it was the first attempt to combine control of an on-screen character – who roamed around an adventure site you could actually see – with traditional word-parsing instruction," recalls the game's author. "You could talk to the Crusoe character, ask his advice, tell him what to do, get his comments, and then watch him do it, or die in the attempt."

There were some arcade titles too, with arguably the best being ports of Jon Ritman's Batman and Head over Heels. With their isometric 3D graphics and smooth animation, these games showed that the PCW was capable of more than just word processing. Other decent ports included Tau City, Ace, Match Day 2 and Last Ninja 2.

But on the whole, the PCW was a productivity machine, as Cliff Lawson attests: "There were some PCW-specific games but let's face it, if you were a games software writer between 1985 and 1987, what would you do: write a game for the CPC, Spectrum and Commodore 64 and sell hundreds of thousands, or write one for the PCW and sell 1,000? There were more PCWs sold than CPCs, but on the whole the people who owned them didn't want to buy games."







Batman and Head over Heels translated well to the PCW, although the graphics were obviously monochrome



Like many of Amstrad's computers, the PCW



getting hard to find and were expensive – often £3 each rather than 50p for a 3.5in disk. Both machines also included a parallel interface so that third-party printers could finally be sold with the machine. Many bundles included the Canon BJ10 inkjet printer. Later in 1993, Amstrad released the PCW10, but despite the new product number, it was essentially a 9512+ with an updated case.

The PCW10 proved to be the final 'true' PCW model, as 1995's PCW16 had more in common with Amstrad's PC clones. It still favoured the Z80, but it was now running at 16MHz instead of 4MHz and featured 1MB of RAM and 1.44MB high-density 3.5in floppy drives. Crucially, CP/M+ was ditched in favour of a new graphical operating system called Roseanne, allowing for WYSIWYG word processing. Despite these improvements, it all came a little too late for Amstrad, with Microsoft Windows and Word already dominant at that stage.

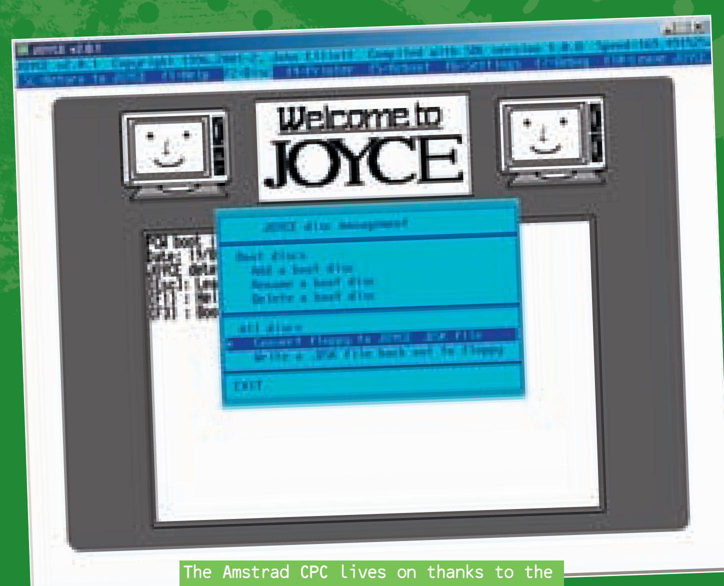
The PCW16 failed to match the success of the earlier models and was soon phased out.

PCW today

Since the PCW bit the dust (and it was reportedly being sold in Dixons as late as 1997), the amount of software has dwindled for the machine. Most of the software houses which wrote for the PCW have ceased trading or have turned their skills to other fields. Some have placed their products into the public domain.

The only PCW emulator available is Joyce (the name of the PCW in Germany) and it can be downloaded from **www.seasip.demon.co.uk**. For copyright reasons, to get Joyce up and running you first need to place an original LocoScript or CP/M+ disk into your PC's floppy drive. There does not appear to be any site offering downloadable PCW games, however.

As with all retro computers, there is a large, close-knit band of support for the machine. Back in 2000 it was believed that more than 200,000 PCWs were still in everyday use. That figure has no doubt decreased since then, but the PCW remains a popular computer; well-loved and certainly not forgotten. RG*



The Amstrad CPC lives on thanks to the excellent Joyce emulator

>Mega PC?

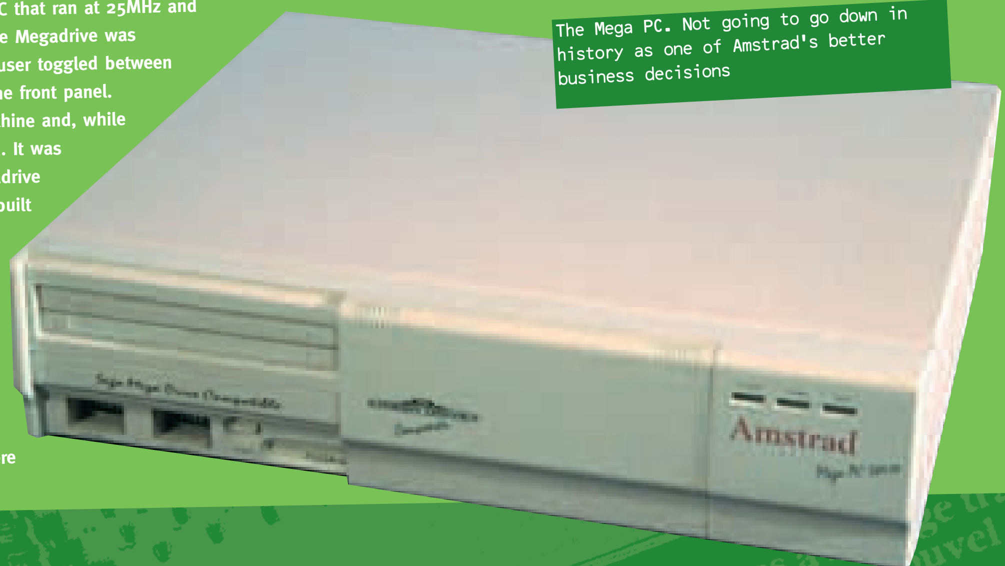
What do you get if you stick a Megadrive inside a PC? The Amstrad Mega PC of course!

Released in 1993, the Mega PC was an Amstrad PC clone which also housed a Sega Megadrive. This rather odd hybrid was billed as being "brilliant for business, mega for games", but in reality it wasn't powerful enough for the average PC owner and was too expensive for console fans.

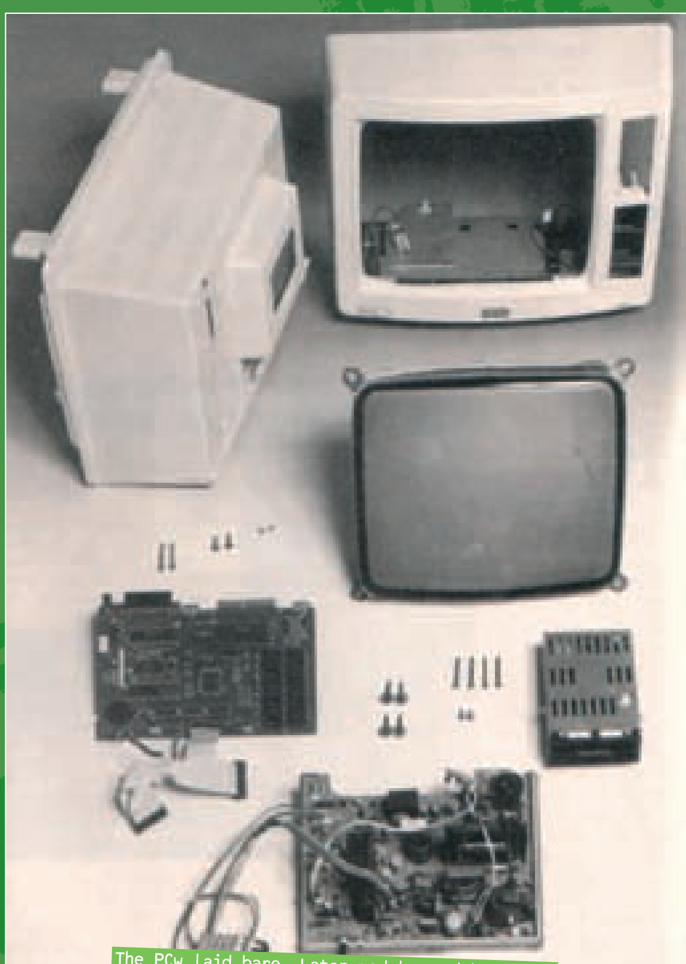
The Mega PC was based around a regular 386SX PC that ran at 25MHz and had a 40MB hard drive. There was 1MB of RAM and the Megadrive was integrated into the computer as a 16-bit ISA card. The user toggled between the PC and Megadrive modes by flicking a switch on the front panel. Cartridges were placed in a slot at the front of the machine and, while playing games, the PC stayed active in the background. It was Sega Mega CD compatible and accepted all Sega Megadrive games. It pumped out music through the monitor's in-built stereo speakers and for those who wanted to shut out the wider world, a headphone socket was also featured.

It was a gamers dream. And, of course, users could also play PC games, putting a huge number of titles at their disposal. But since it retailed at £599 plus VAT, it was placed in a precarious position and was withdrawn after a year.

That is not to say improvements to the product were not made. There was a 2MB 486SLC Mega Plus which retailed for £799 plus VAT. This model ran three times faster than its predecessor and came with Windows 3.1 installed as opposed to the MS-DOS v5.0. For an extra £100, buyers could also upgrade to a 130MB hard drive and 4MB of RAM. But again, this threw the machine into a bracket too dear for console users, and the Mega Plus disappeared as quickly as its predecessor.



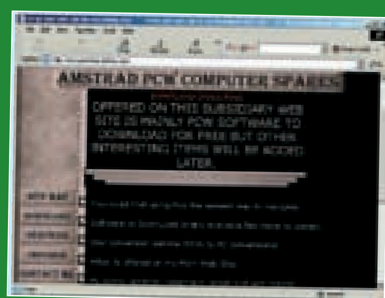
The Mega PC. Not going to go down in history as one of Amstrad's better business decisions



The PCw laid bare. Later models would update the casing, but the hardware inside remained the same

Web resources

PCWKing



www.pcwking.netfirms.com
Enthusiast John King runs this comprehensive site, aiming to keep the PCW scene alive.

SD Micro Systems

http://members.aol.com/sdmicro
One of the best places to get hold of PCW software and hardware. Steve (the company's owner) also sells a disk of puzzle games for the PCW16.

Amstrad Computer Site



http://web.ukonline.co.uk/cliff.lawson/index.htm
Cliff Lawson's homage to all things Amstrad, with an emphasis on the PCW.

John Elliot's Homepage

www.seasip.demon.co.uk
Home to Joyce, the PCW emulator for Windows and Unix.



>Desert Island Disks

What eight games would you choose to play to while away the time on a desert island? Paul Drury asks another of our castaways that very question



>WHO?

Vicky Carne, founder of 8-bit software house Mosaic Publishing

Licensed videogames. You can't walk into a games retailer without being confronted by a slew of hastily converted, lazy game tie-ins, making tenuous links with everything from the latest Hollywood blockbuster to some celebrity media whore. The whole process of using the majority of a game's development budget on securing a big name licence to hide a shoddy product is the curse of this industry and we want someone to be held accountable.

"Yes, I'll take responsibility for that," says Vicky Carne. "All of it."

We've found our fall guy. Except, this isn't a gruff boast from some cynical marketing suit, but instead a quiet, knowing 'confession' from the cultured tones of Vicky Carne, founder of Mosaic Publishing. Back in 1983, she had the innovative idea of releasing games based on books and bundling the text with the software. A very rewarding relationship with the Austin brothers of Level 9 Computing resulted in successful games based on The Secret Diary of Adrian Mole and Erik the Viking. She also published the only major game written by Retro Gamer's own Keith Campbell, The Pen and the Dark, and she even coined the phrase 'bookware'.

"We had hard and software, so I thought bookware was a good description of what we were doing. It wasn't totally new – The Hobbit had been published – but we were the first company to publish short stories together with the adventure game."

It was quite an achievement for a woman who grew up in London in the fifties and sixties, untroubled by the world of computing. However, a career in literary publishing included a spell at Sinclair Browne, the publishing house jointly owned by Sir Clive Sinclair. "We published a wide range of books, from fiction to non-fiction and poetry, and we did have a small range of computer books, things like Sixty Five Million Games for your ZX80. Did I meet Sir Clive? Not very often. He was in Cambridge and we were in London."

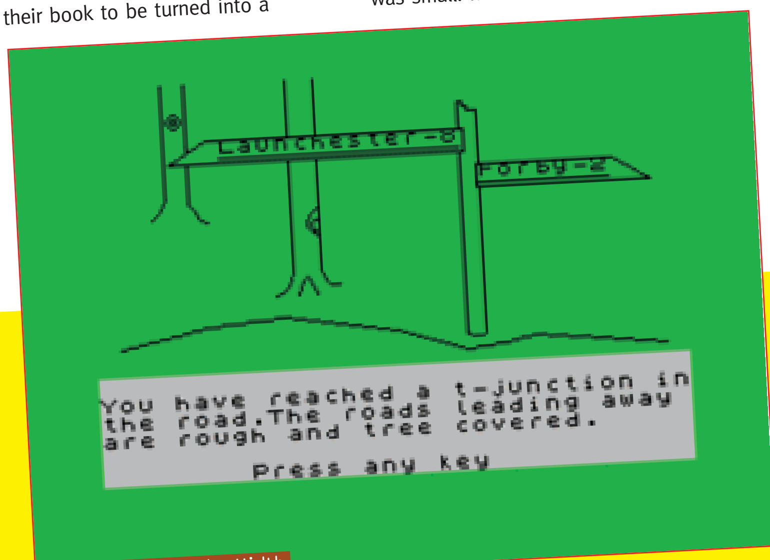
I try to probe further, and mention Sir Clive's recent appearance on Channel 5's Is She Really Going Out With Him? on why beautiful women find ugly men attractive. Does she think his inclusion was justified? I receive an abrupt "no comment". Then, after a lengthy pause, "Well, I think ugly is going a bit far..." You see, the ginger-bearded Lothario has still got it...

Science fiction, double feature

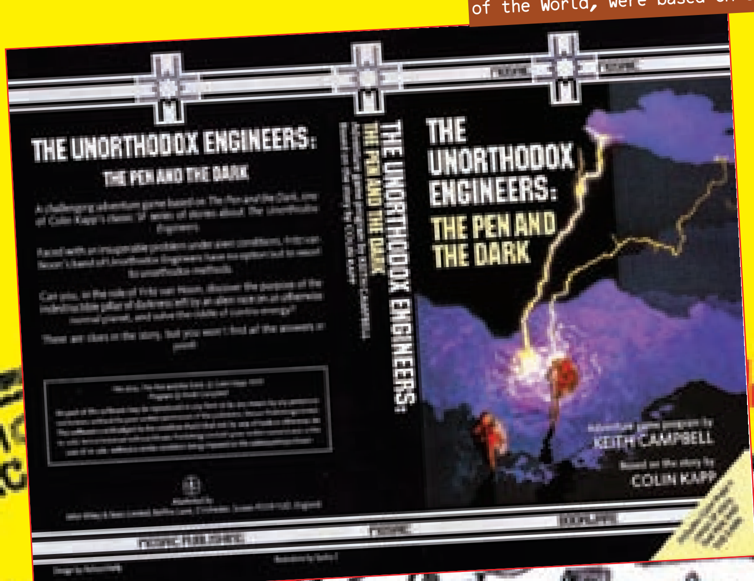
The first two titles from the fledgling Mosaic Publishing Ltd were The Unorthodox Engineers: The Pen and the Dark and The Width of the World, released simultaneously in 1984 and based on the work of science fiction authors Colin Kapp and Ian Watson, respectively. Vicky's previous role at Dobson Books, which published many sci-fi novels, meant she knew numerous literary agents and the actual choice of titles was determined by a combination of factors – which stories she believed would translate well into adventure form, the interests of the people commissioned to program the games, and which licences could be acquired.

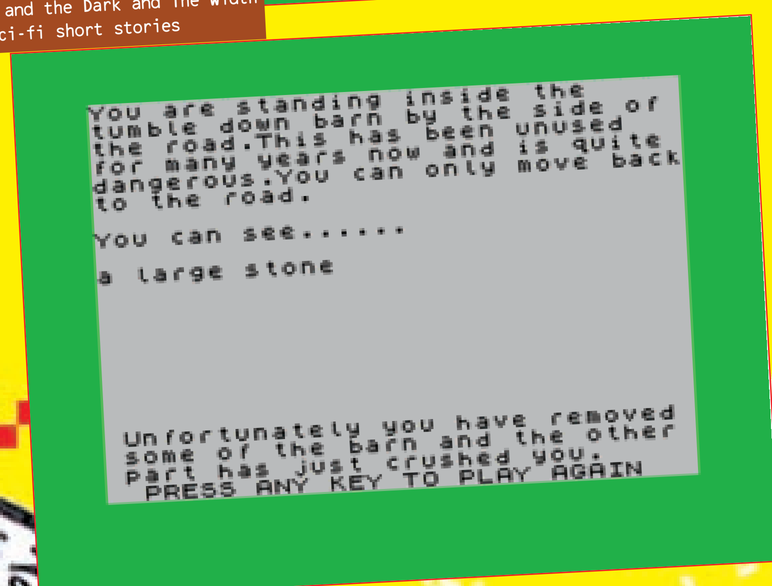
"Getting the licences wasn't so much the difficulty as working out what we were licensing. We had to invent what we were paying for... it came somewhere under 'electronic rights'. Asking someone to licence their book to be turned into a computer game was a bit of an unknown quantity."

It is usually programmers who get the credit for pioneering new ideas in the early days of the games industry, but here was a publisher trying something a bit different – and putting her money where her mouth was. Fortunately, it paid off, in no small part due to a clever arrangement with a Book Club partly owned by WHSmith. "They had just added a computer games section and each month there was a Special Selection, which if you didn't reply in time, you'd get sent anyway. The Pen and the Dark was a long-running 'special'. It had sold reasonably well initially, but bear in mind the market was small. It went on to do extremely

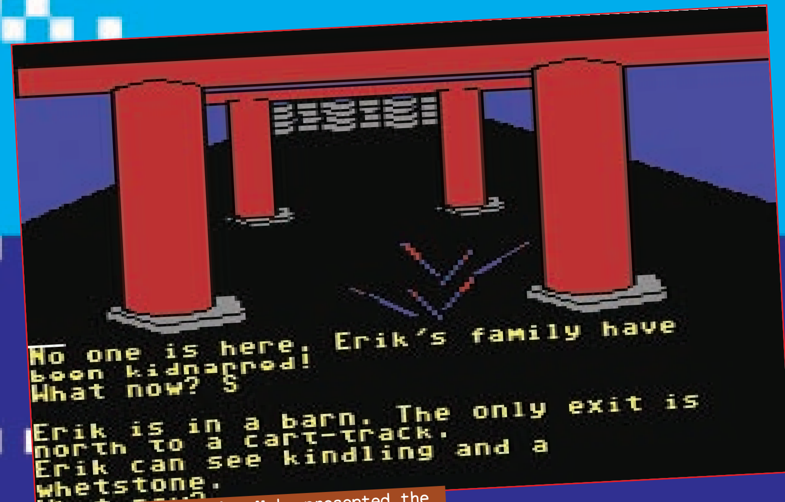


Mosaic's first games, The Pen and the Dark and The Width of the World, were based on sci-fi short stories

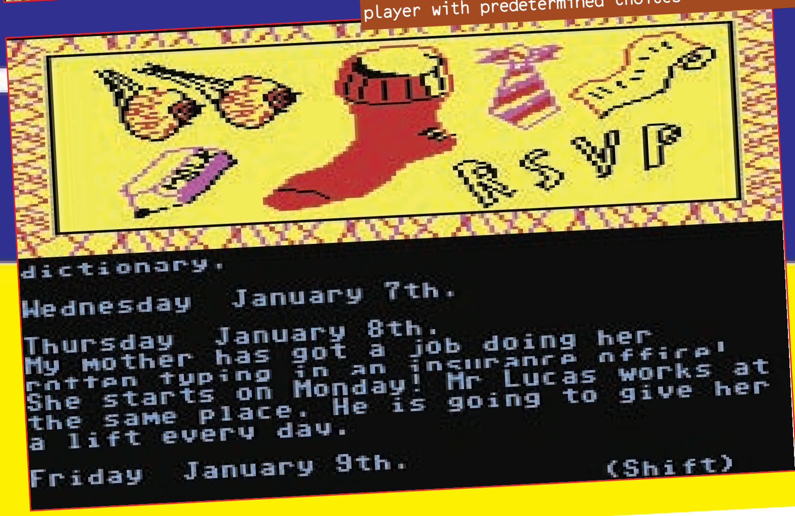


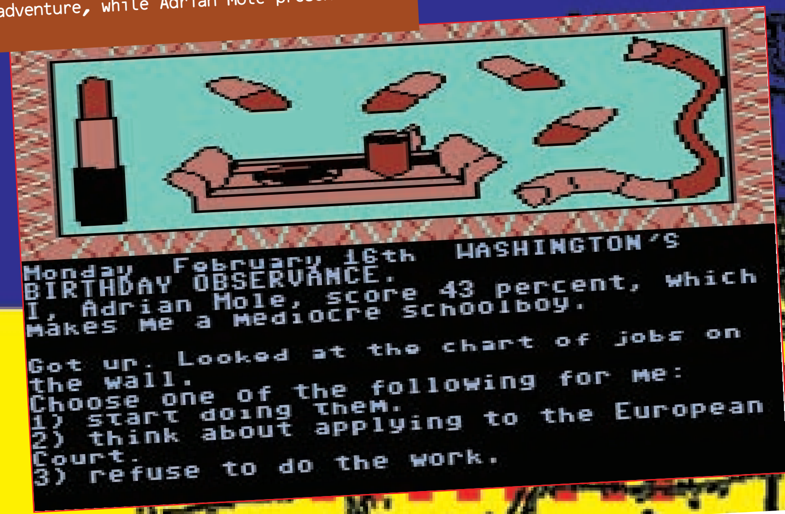






Erik the Viking (above) was a typical Level 9 adventure, while Adrian Mole presented the player with predetermined choices





well for years through the Book Club."

We can't help but smile at the percentage of the 20,000 punters that ended up owning Keith's game simply because they were too slow in get down the post office. Future titles from Mosaic also sold well through this mail order arrangement, though the first title produced in partnership with the Austin brothers of Level 9 – Erik the Viking – also found a new audience, as Vicky explains.

"It was taken up widely in junior schools and you'll find it reviewed in educational magazines, discussing the exciting ways it was being used in geography, history and computer teaching."

A rare piece of evidence to support those childhood pleas to your parents that they should get you a Spectrum 'to help with homework'. We wonder whether there was any educational zeal behind Vicky's promotion of bookware. Was it an excellent way to encourage kids to read through play, or just a crafty way of selling them a book on the side?

"Not quite either, I think. It was to make more of the game. Particularly in the early ones, if you read the book it would give you more clues – there was more of a connection. But at the time we weren't consciously thinking of ways to encourage children to read – dragging children away from their computers wasn't a problem many people were familiar with in 1985. And I think the market was a bit older than that anyway. I'm not sure how many smaller children would be able to set up a Spectrum, never mind have the patience to sit and wait while something loads."

Level best

Erik the Viking was followed by the company's biggest success, The Secret Diary of Adrian Mole, again produced with the Austins. Rather than a traditional text adventure, the game adopted a branching narrative approach, which involved the player picking from a number of predetermined choices. The format, which Vicky and Pete Austin came up with together, opened up a fresh demographic.

"The multi-choice format made it much more accessible for lots of people, people who enjoyed the 'what if?' scenario in books but who wouldn't sit down and play an adventure game."

The game sold several hundred thousand copies, again helped by a deal with Commodore, who included the game in its latest C64 package. "I remember it featured in one of Commodore's pre-Christmas TV adverts. In fact if I recall, it was actually set on a Desert Island and a castaway receives the bundle, though I don't know what he was going to plug it in to."

Quickly skipping over the question we get asked most often by our interviewees, we move on to discuss the BBC licences. The launch of Yes, Prime Minister, this time produced by Oxford Digital Enterprises and scripted by an Oxford University lecturer, was attended by several MPs and the Junior Education Minister, but I'm most intrigued by one of the most unlikely computer game conversions ever – The Archers.

"We wanted to look at something familiar but more because it was a soap opera, which I think has a structure much like a multi-choice game. You have these multiple story-lines going on, these strands, and it works really well with that format. We got the producer in on the idea and he ended up writing some of the text for the game. Why not Coronation Street? It must have crossed our minds, but of course that was visual, and the primitive graphics we had wouldn't have been able to produce recognisable characters, whereas with The Archers being on the radio, you already had to use your imagination."

This careful consideration of which licences might work best with particular game genres seems aeons apart from the modern approach of slapping a big film licence over whatever project is currently in development. This makes us rethink our initial position – if the *spirit* of a fictional work, rather than just its household name status, is used as inspiration for game design, the results could be interesting. It's a point further supported when Vicky tells us of an unfinished project.

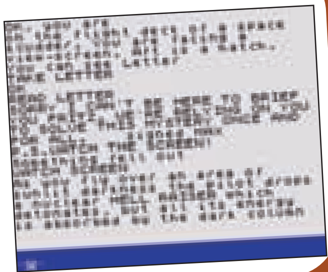
"The one that didn't get made

and should have done was a Not The Nine O'Clock News game. One of the scriptwriters on the series was very keen on the Spectrum and had written a version. It wasn't publishable, but was quite a way along. I don't know why it never got fully implemented, because his ideas were very funny, very witty, and it would have done well. I remember it included a game of Noughts and Crosses that cheated…"

The anarchic satire of Rowan Atkinson, Mel Smith et al in game form, with 'The Ayatollah Song' as the theme tune does sound tempting. What with the huge success of the Harry Potter books and a general rise in the popularity of reading in the UK, would she ever consider going back into publishing some form of bookware, especially as she operates her current company, Email Reaction, in partnership with none other than Peter and Mike Austin?

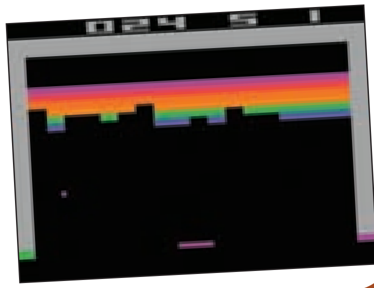
"I think so many modern books would translate well, as long as people aren't hung up on visuals. Perhaps a game based on email? An update a week… Is anyone doing a soap by email?"

The Pen and the Dark



Mosaic, 1984
I was very keen on British science fiction writers of that time, like Colin Kapp and Eric Frank Russell, so I liked the subject matter.

Breakout



Atari, 1976
I played it on a computer years ago – can't remember which one – but now I play it on my phone. Again, a simple concept that never gets boring.

The Hitchhikers Guide to the Galaxy



Infocom, 1984
I played it on my C64, though not all the way through. I noticed there's a link to the actual game on the BBC website and I recognised some of the bits as I played it again.

Podd



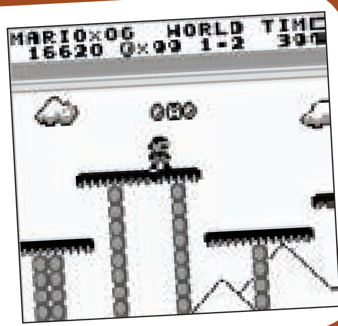
Softech, 1983
An impressive kid's game for the BBC Micro that my daughter really got into, and by extension it grabbed my attention too. Really clever.

The Hobbit



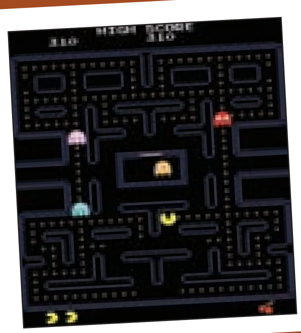
Melbourne House, 1982
This was the first text adventure I ever played, and it was on a Spectrum at Sinclair Browne. My friends and I were just amazed you could do this sort of thing.

Super Mario Land



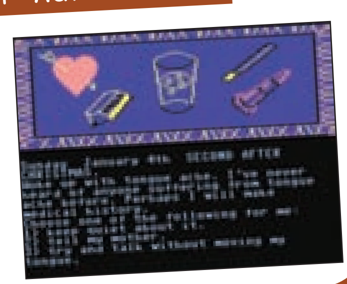
Nintendo, 1989
Again, I got into this through my daughter, who played it endlessly on her GameBoy. It's a very addictive game, and the music lodges itself in your head.

Pac-Man



Namco, 1980
This is the very first game that I ever played, and it was on a stand-up arcade machine in America. Despite the game's simple nature it's still very playable to this day.

Secret Diary of Adrian Mole



Mosaic, 1984
This worked really well and was our biggest success. Oh dear, I do like my own games, don't I? I very much enjoyed publishing and inventing computer games, but don't play them that much.





>Big N is Watching

In the mid-eighties, Nintendo more or less owned the US console market, with the NES accounting for 95% of all sales. During this very successful period, Nintendo of America attempted to reinvent the videogame industry from the ground up. In hindsight, many of Nintendo s business practices during this period seem bizarre. No gaming company before or since has tried to control so many facets of its own operation, from the production of the game cartridges to the content of the games themselves. As Thomas Wilde and Alicia Ashby discover, Nintendo s strict guidelines ultimately did the company more harm than good

One of Nintendo of America's more controversial policies was the institution of its 'content guidelines', a set of 10 rules that determined whether a game was deemed suitable for release on Nintendo's hardware. If a game failed to follow the content guidelines, it wouldn't receive the coveted Nintendo Seal of Quality. That, in turn, meant that Nintendo wouldn't manufacture the cartridges. If you wanted to publish a game on the NES, it first had to pass the muster of Nintendo's censorship department.

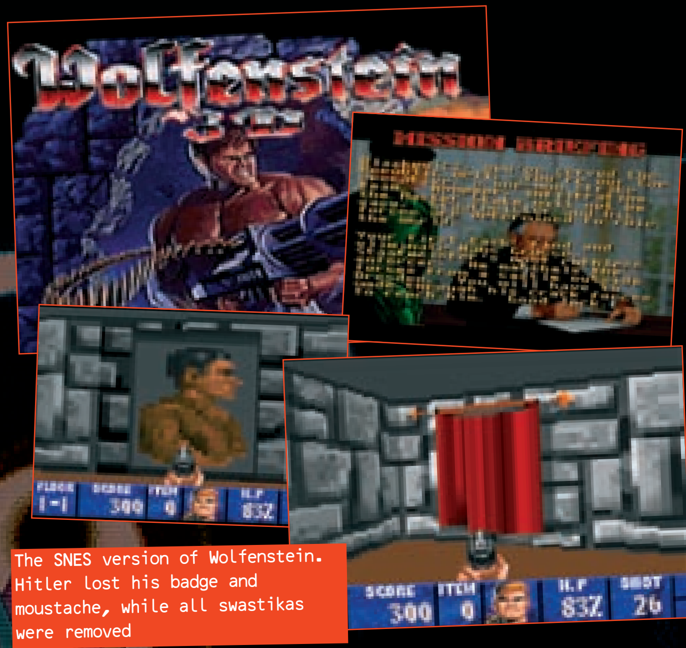
On the face of it, this doesn't seem like a big deal. As a matter of fact, it won Nintendo some points with parents' groups at the time, which applauded what was seen as a responsible decision on the company's behalf. However, controversy arose from a handful of different reasons. For one thing, the guidelines were somewhat haphazardly applied. For instance, it forbade the use of the words 'kill' or 'death' in a game's manual or dialogue, which was often seen as a somewhat heavy-handed attempt to disguise what a given game was about. No amount of linguistic quibbling would cover up the fact that an enemy's 'defeat' would come about via the employ of firearms and/or sharp objects.

Keep it clean

Another problem came up when Japanese games were being localised and translated for their Western release, as Nintendo of Japan didn't have content guidelines. More importantly, in Japan Nintendo produced and marketed games that aimed at a far older demographic, and catered to the mores of a more sexually liberal nation. Many Japanese Nintendo games, particularly RPGs like Shin Megami Tensei, were rife with risqué humour, irreverent use of religious symbols, and blunt depictions of murder.

Japanese games were frequently censored or edited during localisation to bring them into line with Nintendo of America's standards, and a few of the most popular games weren't translated at all. The result was that many NES and SNES games came across as stilted or bizarre, as adult concepts were ham-fistedly crammed into kid-friendly forms. Sake became soda, strippers became fully-clothed dancers, dialogue was simplified or rewritten to remove adult content, all religious references were removed (Nintendo went so far as to forbid the presence of the Red Cross's logo in its games, even though the Red Cross is based on Switzerland's flag), Nazis became aliens or generic terrorists, and female characters were often put in less revealing clothing.

Some third-party publishers would eventually rebel against Nintendo's Content Guidelines and produce unofficial games that violated them, such as Bubble Bath Babes or Bible Adventures. For the most part, however, Nintendo's censorship would pass without incident...



The SNES version of Wolfenstein. Hitler lost his badge and moustache, while all swastikas were removed



Companies like Panesian and Color Dream dodged Nintendo's content guidelines by releasing unofficial games

A Nazi business

Nintendo's censorship practices in the American market continued well into the 16-bit era. Some of the changes were fairly innocuous, such as name changes and tweaks to game difficulty and options menus. However, the enforcement of Nintendo's content guidelines was even more damaging to games of this generation than it had been in years before. The NES had been, at its heart, a console for children and general audiences, but the audience for the SNES was beginning to mature.

Game makers were quick to try and cater for this older audience by releasing ports of major PC hits. These games were much more sophisticated than the bulk of what was released on the 8-bit NES, but also far more likely to incorporate potentially offensive material. Since Nintendo still viewed children as the primary audience for its product, it often refused to relax its content standards for any game in order to make sure parents weren't offended. The neutered SNES port of the PC hit Wolfenstein 3D is perhaps the most infamous example of how this attitude could ruin a game meant for the older audience.

The original storyline of this early FPS game, such as it was, had the player storming a castle infested with Nazis in order to eventually do battle with Hitler himself. However, Nintendo was completely unwilling to allow any sort of references to Nazis. All of the swastikas and Nazi references were removed from Wolfenstein, and the player instead stormed an inoffensively bland castle infested with vaguely foreign thugs in order to eventually do battle with the 'Staatsmeister'. Blowing away your enemies resulted in strangely copious amounts of sweat instead of blood, and your enemies were bizarrely accompanied by giant rats instead of the original's German shepherds.

It's hard to imagine such intense censorship of a major PC title being tolerated by modern gamers, and chances are it wouldn't be. When considering Nintendo's practices in the early 90s, it's important to realize that most gamers still had no awareness that their games were being censored. A few die-hard import fans might be able to complain about graphics and text being altered in Final Fantasy titles, but nobody really cared what they thought. This blissful ignorance was ended by the storm of controversy that surrounded the release of Mortal Kombat on the SNES.

Kombating censorship

It's all too easy to underestimate just how popular Midway's Mortal Kombat was in the US in 1992. Arcade titles

still had a certain mystery to them that console and PC titles couldn't match, thanks to the often-superior hardware and an arcade cabinet's customised controls. Arcades were also still a major feature of every suburban shopping centre, and many parents would happily drop kids off there with a few coins while they went about their business.

A year earlier, Street Fighter II had become an international success. The time was ready for other competitors to exploit young gamers' fascination with virtually pounding the crap out of each other. Of course, any SFII clone would let you beat up another guy, so how was a fighting game to distinguish itself in this crowded market? By letting you brutally *kill* the other guy, of course.

With the addition of this feature and a lot of gratuitous in-game gore, young gamers were suddenly drawn toward Mortal Kombat. Most arcades were crammed with Street Fighter clones in those days, but even SFII seemed pale compared to Mortal Kombat's novel motion-capture graphics and ability to let you beat a guy to near death and then rip his spine out. Teenagers loved it for all the reasons that teenagers usually like tastelessly violent things, while younger kids liked it because their parents would absolutely never approve of it.

Arcade visits were expensive, however, and demand for a home version of Mortal Kombat quickly grew ravenous. Midway was determined to deliver, and paired with publisher Acclaim in late 1993 to have versions of Mortal Kombat in the works for every major home console and handheld. By far, the two most anticipated were the Sega Megadrive and Super Nintendo ports. These were the leading systems of the day, and the fact that Sega and Nintendo were locked in a dead heat for control of the worldwide videogame market made the release more important than it might have otherwise been. The Megadrive had earned an early lead by releasing its hardware first and followed up with a masterful ad campaign, while Nintendo had its own



Midway's Mortal Kombat ramped up the gore score to max. Kids naturally loved every bloodthirsty second

>Laying down the law

The following is a reproduction of Nintendo of America's content guidelines for the NES. Every Nintendo game, before it could get Nintendo's official Seal of Quality (and thus gain access to the North American gaming market), had to meet with these standards.

Nintendo of America's Video Game Content Guidelines

Nintendo of America's priority is to deliver high quality video game entertainment for our customers. When those customers are children, parental involvement in their game playing is recommended. Nintendo is concerned that our products do not contain material that society as a whole deems unacceptable.

Consequently, since 1988 we have consistently tested the content of all games developed for Nintendo systems against our evolving game standards. As our business has matured, we have adapted our guidelines to meet the concerns of the members of our target age group and their parents. Although we realize that definitions of social, cultural and political views are highly subjective, we will continue to provide consumers with entertainment that reflects the acceptable norms of society.

The following Game Content Guidelines are presented for assistance in the development of authorized game paks (i.e., both Nintendo and licensee game paks) by defining the type of content and themes inconsistent with Nintendo's corporate and marketing philosophy. Although exceptions may be made to preserve the content of a game, Nintendo will not approve games for the NES, GameBoy or Super NES systems (i.e., audio-visual work, packaging, and instruction manuals) which:

- include sexually suggestive or explicit content including rape and/or nudity;
- contain language or depiction which specifically denigrates members of either sex;
- depict random, gratuitous, and/or excessive violence;
- depict graphic illustration of death;
- depict domestic violence and/or abuse;
- depict excessive force in a sports game beyond what is inherent in actual contact sports;
- reflect ethnic, religious, nationalistic, or sexual stereotypes of language; this includes symbols that are related to any type of racial, religious, nationalistic, or ethnic group, such as crosses, pentagrams, God, Gods (Roman mythological gods are acceptable), Satan, hell, Buddha;
- use profanity or obscenity in any form or incorporate language or gestures that could be offensive by prevailing public standards and tastes;
- incorporate or encourage the use of illegal drugs, smoking materials, and/or alcohol (Nintendo does not allow a beer or cigarette ad to be placed on an arena, stadium or playing field wall, or fence in a sports game);
- include subliminal political messages or overt political statements.

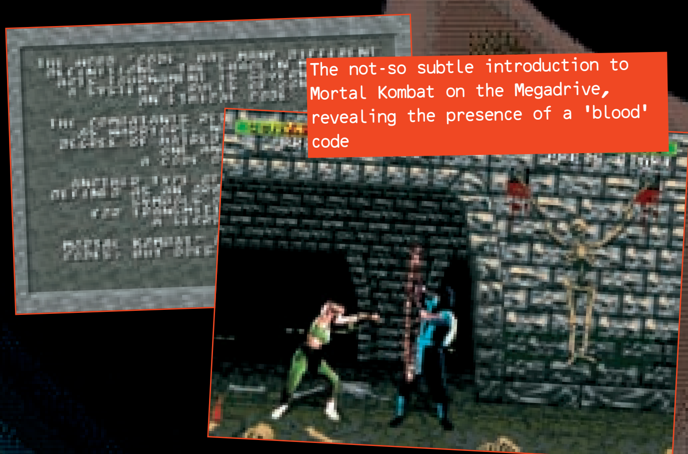
brand name and a reputation for superior games to bank on.

Didn't bleed red

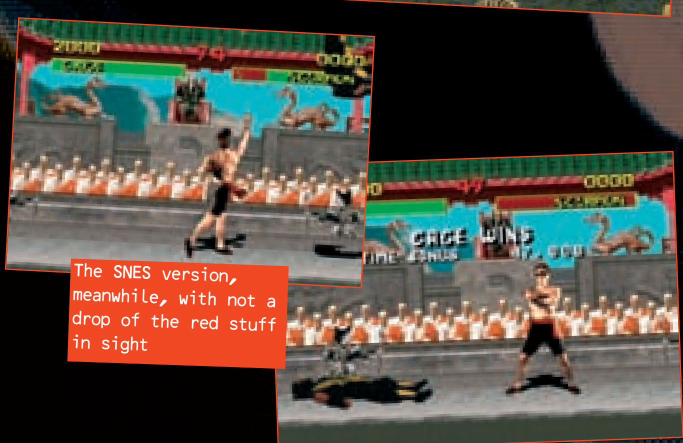
Both systems would host censored versions of Mortal Kombat. However, the Megadrive port contained all the violence – you just needed to enter a special code to unlock the gore. The SNES version, meanwhile, featured grey 'sweat' instead of blood and a full set of new, sanitised 'Fatalities.' Of the two, the SNES version looked and controlled better, but no one was buying Mortal Kombat for its deep and technical gameplay. They wanted to knock somebody's damn head off, and the Megadrive version delivered.

Between the title's popularity, the controversy over its content, and then the controversy over the censoring of that content, Midway was able to reap an enormous amount of publicity for its title. The motion-captured graphics struck mainstream reporters as unbelievably realistic, which made the rather cartoonish Fatality moves seem somehow ultra-violent in comparison to what they imagined went on in video games. As the debate became about entertainment in general and newspaper critics began comparing the violence of Mortal Kombat to the bloodier Shakespeare plays, both Nintendo and Sega tried to save face with outraged parents. Nintendo pointed proudly to its removal of much of the more graphic content, while Sega showed off its self-imposed ratings system that labelled the game 'MA-13'.

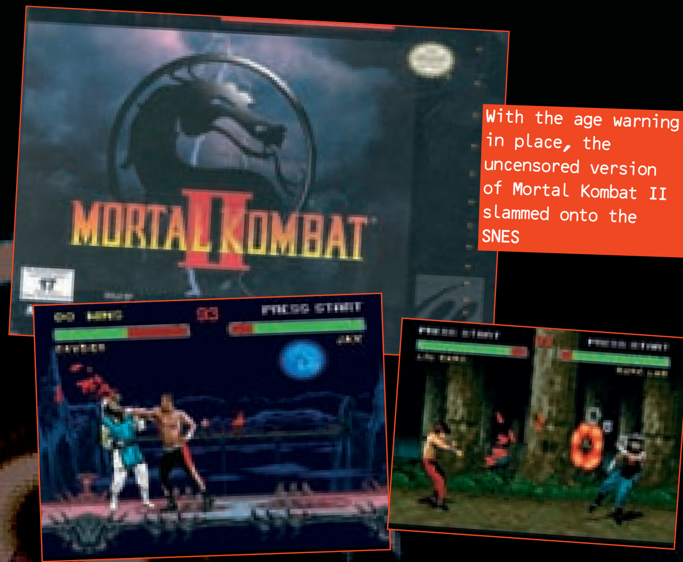
Not content to let the mainstream press do the job entirely for them, Midway and publisher Acclaim made a point of hyping up Mortal Kombat's multiplatform release. They declared the September 15th release day 'Mortal Monday' and tried to strictly enforce the street date. On the first day alone, Acclaim moved roughly two million Mortal Kombat cartridges. The fact that one version was censored and one wasn't quickly became a major issue. Many children and teens begged parents to let them have new Sega Megadrives so they could play the uncensored version. As the year drew to a close, six million copies of the Sega version had sold along with a spike in sales of Genesis units, while the Super Nintendo version sold five million units. Based on Mortal Kombat sales alone, Nintendo's market share in the 16-bit area slipped by 10 percent in 1993.



The not-so subtle introduction to Mortal Kombat on the Megadrive, revealing the presence of a 'blood' code



The SNES version, meanwhile, with not a drop of the red stuff in sight



With the age warning in place, the uncensored version of Mortal Kombat II slammed onto the SNES

Government intervention

Such blockbuster sales inevitably drew more fire from watchdog groups, and along with it, the attention of the government. In the summer of 1994, Senator and future Vice Presidential candidate Joseph L. Lieberman of Connecticut, and Herb Kohl of Wisconsin, begun work on a bill that, if passed, would have mandated a uniform ratings system for all "interactive entertainment applications". Desperate to keep the government out of their industry, Sega and Nintendo promptly joined forces to form the Interactive Digital Software Association. The game makers claimed this body would allow Sega and Nintendo to voluntarily self-regulate, using a set of ratings that would be consistent between the two companies. A third ratings system was proposed by the Software Publishers Association, a consortium of software developers.

The release of Mortal Kombat II in 1994 only complicated matters. This arcade sequel was just as bloody as the original, although it also included 'Friendship' moves in mockery of Nintendo's censorship that let you make up with the defeated opponent instead of killing them. The home console version by Acclaim was promised in time for Christmas 1994, and this time Nintendo was determined to get an uncensored version of the title onto its system, citing complaints from consumers last year as its reason why. While both Sega and Nintendo's versions of the game carried ratings on the package that warned players younger than 17 away from the game, the ratings were still not uniform and not mandated by law. However, by the time the year was over, Sega and Nintendo's IDSA had developed into the Entertainment Software Ratings Board. This organisation was to be to the game industry what the Motion Picture Association of America was to the Hollywood film industry, a self-regulatory board that clearly labelled products for content and, as a result, kept Congress from writing legislation to determine content standards. Although the ratings system wasn't ready in time for Mortal Kombat II, game packaging bearing ESRB ratings appeared on store shelves by the end of 1994.

The formation of the ESRB and the release of Mortal Kombat II for the SNES in uncensored form were both landmark events in Nintendo's history. While Nintendo was never willing to abandon its family-friendly image, they never again forced software publishers to censor titles in order for them to be released on Nintendo systems. Although censored titles still appeared after the formation of the ESRB, such as Lufia 2, the decision to censor was usually made by the publisher rather than by Nintendo

itself. As the 16-bit generation passed away and the 64-bit era began, Nintendo's consoles began to play host to titles that were just as raunchy, gross, and violent as anything other systems offered. One particularly infamous title, Conker's Bad Fur Day, only appeared on the N64.

The sudden change of attitude from Nintendo was entirely due to the formation of the ESRB ratings system. As far as Nintendo was concerned, the duty of policing content on its systems was no longer in its own hands.

A lesson learnt?

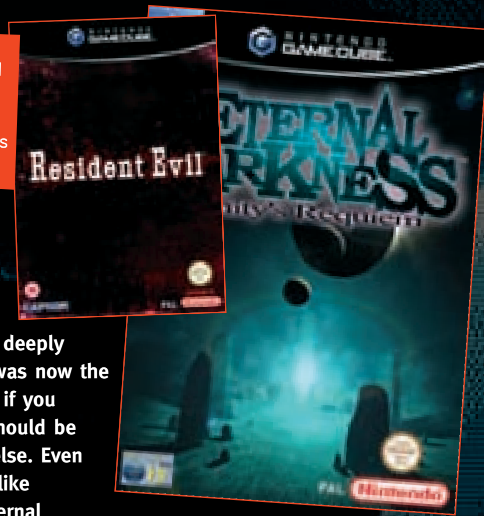
By the end of the 16-bit era, the Super Nintendo had lost out to the Megadrive due to a combination of factors, not the least of which was its failure to adapt to and appeal to an aging market. Mortal Kombat didn't do all the work by itself, but it had created the first chink in Nintendo's armour.

Mortal Kombat had proven that there was a market for realistically violent games, and the industry was quick to respond. The cartoony sprites of the 8-bit era slowly dissolved, as developers rushed en masse towards digitised graphics, polygons, and full-motion video.

As gaming moved into the 32- and 64-bit era, Nintendo quickly lost ground despite its newfound lack of censorship. As many other companies became focused on 'mature themes', Nintendo and its child-friendly franchises rapidly dwindled in popularity. They compounded the problem by stubbornly sticking to the cartridge format, and while the GameBoy would keep the company afloat through the end of the 90s, Nintendo was no longer a force to be reckoned with.

It was still making some of the best games in the world, but it'd also acquired an unfortunate reputation. The image of the responsible, parental company had lingered, but twisted by adult fans into something deeply negative. Nintendo was now the system for children; if you weren't a kid, you should be playing something else. Even hosting blood-fests like Resident Evil and Eternal Darkness on the GameCube has done little to change its reputation.

It's hard to say that Nintendo was wrong. It certainly made its share of mistakes, and in retrospect, a lot of the changes it made to its titles don't make a lot of sense. At the same time, though, you can't really blame the company for trying to make sure that its product wasn't controversial. At the time, electronics stores were still a rarity, and most Nintendo products were sold in toy stores. Even today, it's no accident that whenever Washington starts complaining about violence in video games, Nintendo's name is rather conspicuously left out of the debate. RG*



Adult-orientated titles have graced the GameCube, but Nintendo's family-friendly image dies hard

>The cutting room floor

Nintendo of American ensured that any questionable content was removed from Japanese games before they were released in the West. Here are a few examples of the kind of things that were cut:

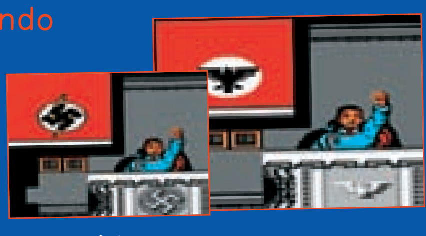
Castlevania

Well, for one thing, it used to be called Vampire Killer. The Cross and Holy Water sub-weapons were referred to as the Boomerang and Fire Bomb in the game's manual, resulting in an entire generation of gamers who have no idea how to fight vampires. (As a happy side effect, this also created a generation of vampires who won't go anywhere near Australia.)

Super Castlevania IV

In a rather John Ashcroft-esque twist, several of the naked statues in the background had clothes put back on them for the US version.

Bionic Commando

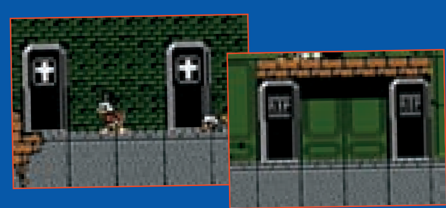


Here's a fun one. This game began its life as a Japanese cart called Hittori no Fukkatsu: Top Secret, which translates to Top Secret: The Resurrection of Hitler. For its American release, the Nazis were renamed the BADDs, Hitler was renamed Master D, and the swastikas on the flags were replaced by vaguely Germanic eagle logos.

Rocket Ranger

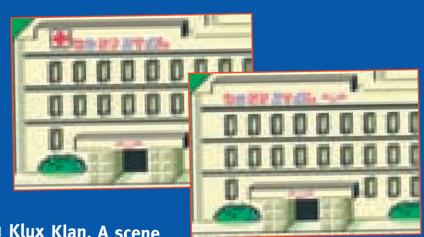
This may be one of the most bizarre translation problems out there. Rocket Ranger is an obscure action game where a jetpack-wielding hero fights against the Nazis just before World War II. For its American release, the Nazis abruptly became an alien race called the 'Leutonians', which had invaded Europe in 1990 and carved out their own country. You were then faced with the prospect of fighting aliens who dressed suspiciously like Nazis and who were flying airships and World War II fighter planes... but they were aliens, dammit.

DuckTales



In the Transylvania level, the tombstones in the background originally had crosses on their lids. In the US release, they were changed to simply read 'RIP'.

Earthbound



The Insane Cultist monsters were given a pom-pom on the ends of their hoods, presumably so they wouldn't look quite as much like repainted members of the Ku Klux Klan. A scene where two children are taken off-screen and presumably beaten by their father was replaced by one where the children are yelled at instead. A Red Cross symbol was also removed from a hospital.

Maniac Mansion

In the PC version of this early LucasArts classic, you could explode a hamster in the microwave. This was removed for the NES version. For the full story of what was censored by Nintendo, take a look at **www.crockford.com/wrrrld/maniac.html**.

>Big in Japan

Not content with browsing through the retro stores and touring the seaside arcades of Old Blighty, Jonti Davies caught the plane to Osaka in order to embark upon a magical quest to unveil some of Japan's finest retro videogame emporia and game centres. Here are the unpredictably varied results...







Kyoto's A-Too shop is home to hundreds of retro games plus some unique hardware

First stop: Kyoto

We didn't expect to see much retro action in Kyoto. The city, despite being home to Nintendo, is more of a culturally significant tourist destination than a Mecca for gamers. Still, this was the base for our stay in Japan, so we asked around and looked around. Not only did we find a number of great little independent game stores – most of which stock a few choice examples of classic games and consoles – but we even managed to locate a few dedicated retro stores.

Ninomiya on Tenjingawa-dori (the 'dori' suffix is the Japanese equivalent of street or avenue), a side-street of neon and anime, seems to be nothing more than an electrical store. Yet, outside Ninomiya is a sign which indicates that some 'TV Games' are stocked on the third floor. And sure enough, after an arduous climb, there can be found a great selection of current and classic games. The store's Super Famicom collection, in particular, is impressive – SFC games make up around one-fifth of the total stock. PC Engine and Famicom rarities are also to be found, but we ended up leaving with a Super Famicom music creation package (Y180, £1), Hudson's 1995 classic Adventure Island 2 (Y980, £5) and Gekibo 2 (Y680, £3.50), the PS2 sequel to the PC Engine's delightful photography game. All quirky bargains from a kooky little shop.

Further down Tenjingawa-dori, A-Too reveals itself to be an absolute gem. This shop has a wonderful Super Mario World facade. While the ground floor is full of new games, at A-Too's entrance is a Super Famicom on display – a different classic runs on the console pretty much every day, reminding us that there is always something new to discover in the world of retro gaming. Inside and upstairs, we reach the heart of A-Too: MSX, Famicom, GameBoy and Super Famicom games by the hundred; Master System, Megadrive, PC Engine, Saturn and Neo-Geo games by the dozen; and a great selection of tabletop systems and LSI relics from the likes of Bandai and Nintendo. This is Kyoto's retro heaven.

A-Too's Saturn collection is especially comprehensive. On the shelves sit copies of highly sought after shoot-em-ups such as Batsugun (a snip at Y3,800, £20), Soukyugurentai and Detana Twinbee. Some of the best bargains to be had are Capcom's titles: the amazing Marvel Superheroes Vs. Street Fighter sells for just Y980 (£5) – and that's with the 4Mb RAM expansion which gives this titles such a mighty kick.

Inside A-Too's sacred glass cabinet, however, lie the kinds of Saturn-based rarities which can make grown men weep: Radiant Silvergun (a steal at just Y16,800, £85, although this, as we will see, is not as much of a bargain as can be had in Osaka) and Dungeons & Dragons Collection (only Y14,800, £75). Moving away





The Gojo-dori arcade (or 'game center', as the Japanese refer to it) was packed with both new and old coin-ops

from the Saturn titles, we found it interesting to note the going rate of an original PlayStation version of Policenauts: specifically, Y15,000 (£75). We hadn't played Hideo Kojima's 32-bit debut previously, but instead of splashing out £75 we opted for the Saturn version; this set us back just Y980 (£5). Some remarkable disparity there, no? (The game, for the record, is a Blade Runner-esque adventure with a galactic twist; very atmospheric and even more movie-like than Kojima-san's Metal Gear Solid series.)

Elsewhere, in Kyoto's suburbs, we found The Restore Store – a retro shop in the truest sense. Here you can buy old games, old consoles, old CDs, old Manga, pretty much old everything. The retro games section is quite a trove. The periphery of the whole store's interior is panelled with hundreds and thousands of loose Famicom cartridges. Average price? Y280 (£1.50) to Y580 (£3) per game. If you're okay with games minus their packaging materials, then the Restore Store boasts a pretty much complete Famicom cartridge library.

If it's arcade games you're after, head to Gojo-dori in Kyoto's Nishikyogoku ward – nearby is the home stadium of J-League football club Kyoto Purple Sanga, who sport the kanji characters of 'Nintendo' on their shirts and are indeed sponsored by the Kyoto giant. Anyway, there is an arcade here which maintains a fine selection of new machines – OutRun 2 and Virtua Striker 4 took many of the Y100 coins that were jangling in our pockets – alongside a great line-up of old machines.





Osaka's Den Den Town, otherwise known as Electric Town for obvious reasons

Among the four rows of old cabinets, we were surprised to see Hudson's original Bomberman game. Further down the line, Atlus' Do Don Pachi is in competition with Taito's Layer Section for the arcade's best shooting title. Besides a few old Capcom fighters, admittedly, the rest of the game center's vintage collection is based on the notion that Mah Jong games will never become dated (which is impossible to dispute, really). Still, the cigarette burns are present and correct.

Kyoto, then, isn't too shabby on the vintage games front. But it didn't prepare us for what we were to experience in Osaka.

Second stop: Osaka

Japan's second city, Osaka is a brash and vibrant metropolis heaving with people and trains and cars and bicycles. Within Osaka's huge sprawl is a ward called Den Den Town. And within Den Den Town are dozens of game stores, many of which carry used retro games and systems, and some of which are solely dedicated to the passion of those who aren't afraid to look back.

The first interesting place we found in Den Den Town was Sega Avion, an arcade full of classic shoot-em-ups and beat-em-ups. Avion is laid out so that one row of retro games is followed by a row of new/recent

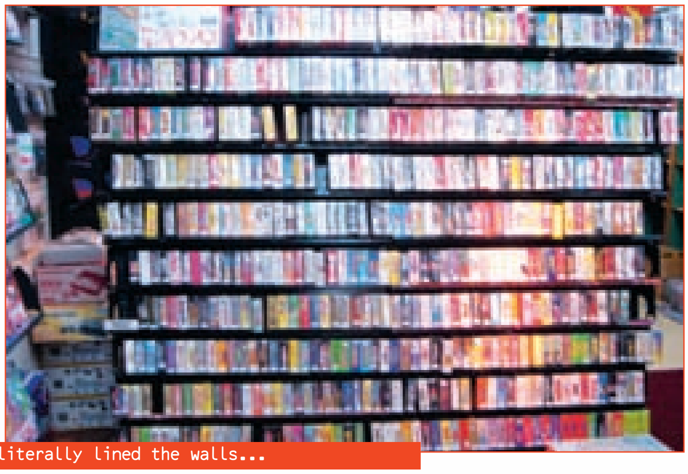




The Sega Avion arcade housed a varied mix of classic games and new releases







The Beating Tiger shop in Den Den Town. Games literally lined the walls...

releases. The result is a pleasant mishmash of games old and new. Play the latest Gundam mech battler, then have a blast on Taito's Metal Black. That's a very good choice to have.

Old puzzle titles such as Compile's Puyo Puyo Sun are in evidence, but the majority of machines are Neo-Geo MVS titles and Capcom beat-em-ups. We were particularly happy to spend some time with Sammy's rock solid isometric MVS shoot-em-up Viewpoint. And it was pleasing to see ashtrays provided at each and every cabinet – not too many smudged burn marks here.

After some playtime we retreated to the safety of the streets, and headed further into the scary, dazzling, noisy web of Den Den Town.

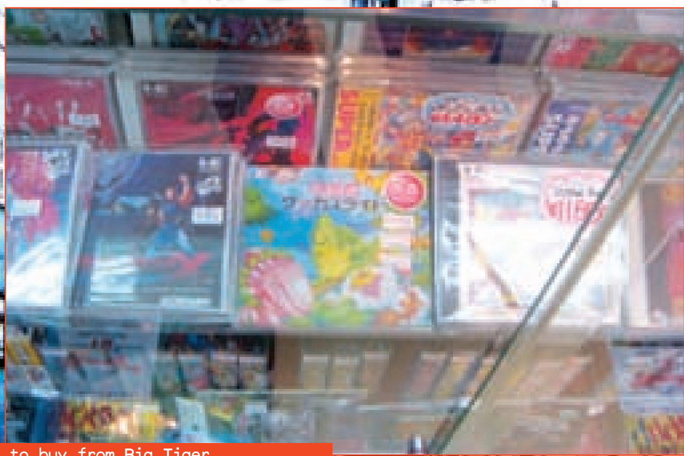
Big Tiger was the first game store we came to. (What a great name, eh.) Inside, we made our way past the omnipresent PS2, GameCube and GameBoy Advance titles and into the beating heart of Big Tiger.

Here, a Super Famicom is hooked up to a small TV and supplemented with an original poster for Zelda III. Next to it, just one of half a dozen Super Famicom consoles in stock – boxed and complete, retailing at just Y2079 (£10). Beneath the demo of our favourite Zelda game are two walls full of lovely complete editions of Super Famicom titles.

All the classics are there – Nintendo's first-party games and Konami's great shoot-em-ups – but some obscure gems are also tucked away in there. We spied a copy of Zamuse's superb anime 2D shoot-em-up Macross: Scrambled Valkyrie. At just Y2,680 (£14), and in mint nick, it was a bargain that we snapped up with no little haste.

Behind Big Tiger's Nintendo section are its NEC and Sega zones. The PC Engine selection is particularly exhaustive. Of course, the rare software is kept behind glass (Circus Lido is now down to Y6,300, £30; and Magical Chase is only Y11,800, £55) but more impressive is the





Some of the rare NEC goodies available to buy from Big Tiger





The Twin Famicom systems were stacked impressively; Super Potato must have 50 or more of these Sharp-manufactured beauties

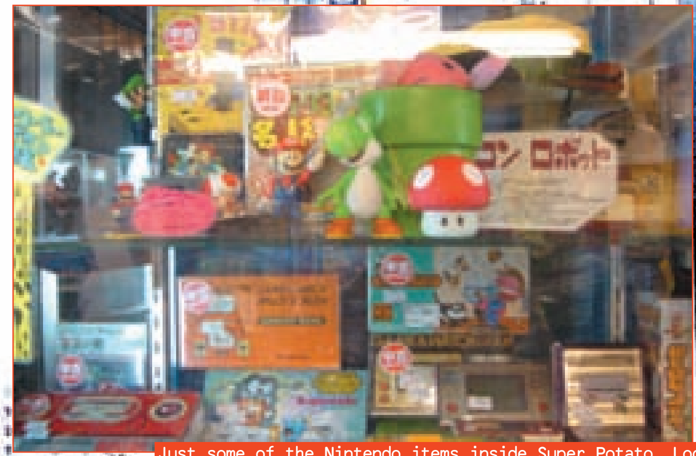
NEC hardware at Big Tiger. They have two – count 'em: one, two – PC Engine LT consoles in stock, one of which is boxed and complete. The price for a slice of retro portable luxury? A mere Y102,900 (£500). It will hold its value much better than a PSP, of course, and the complete library of PC Engine huCards are playable on this beautiful system. And, even more impressively, the unboxed example is selling for just Y50,400 (£250). Great stuff – but no, we didn't. A more reasonable alternative is the PC Engine Shuttle system, which Big Tiger also carries: this Starship Enterprise-modeled huCard player is a catch at just over Y15,000 (£75).

The highlight of Big Tiger (from our perspective) cost us Y15,000 (£75), but it was not Enterprise-shaped. No: we instead bought a perfect Radiant Silvergun for this princely sum. (Y14,800 in actual fact.) And there are more where that came from: Big Tiger has five copies of this rare (and superb) Saturn shooter. This, for the record, is the cheapest we've seen Silvergun since its launch late in the last decade.

Content and poorer, which, as the saying has it, is rich enough, we left Big Tiger to prowl on its own. Next stop, for much-needed refreshments, was Mister Donut. One green tea donut later, we were back on the main street of Den Den Town, heading towards the retro nirvana that is known as Super Potato. (In Japan, the bizarre shop names never stop.) This is where the fun really begins.

Strangely, there are two Super Potato branches (or roots) within the space of six shops. The first Potato we came to was pretty hot. Its full title is Super Potato 7, and its slogan is beautifully poetic: "Get Your Wonder Soft World!" That explains it all.

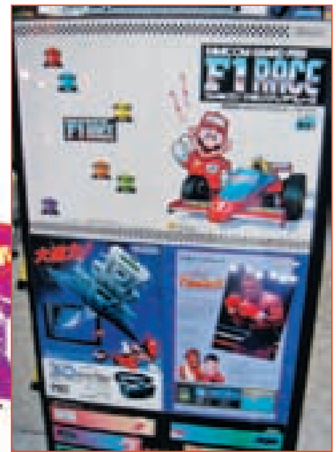
Here, as with Kyoto's A-Too, the ground floor is given over to going concerns while the retro games are stocked





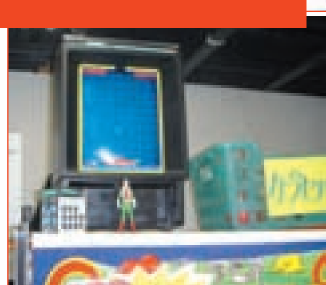
Just some of the Nintendo items inside Super Potato. Look at the Famicom Box! How cool is that?





The second Super Potato store is an exclusive retro domain, with nary a new game in sight





upstairs. And what a staircase! Climbing the steps of Super Potato is like ascending a stairway to heaven: vintage images and posters are plastered on the walls, recalling past glories, and Famicom music becomes more clearly audible until – bang! – you are in the dreamy videogame equivalent of a cluttered antiques shop playing Bach. Quite a sublime experience, as you can imagine.

Next thing, we were bowled over by a Famicom-TV hybrid the likes of which we had only previously seen in old Famitsu scans. Super Potato is quite small in terms of surface area, but it is packed with all sorts of stuff – not simply Super Famicom and Saturn equipment, but real old-school kit such as Nintendo's (orange) TV Game system, the Twin Famicom, and, of course, the glorious MSX format. In fact, Super Potato 7's MSX games collection is the most complete we've seen in a long while. The original Metal Gear was a tempting proposition, especially in its oversized MSX packaging, but we held back and moved on. Then we saw Mario, golden and statuesque, behind a shield of glass. At Y19,800 (£100) we contemplated taking Mario home with us. (Turns out it's not real gold, though, so we passed it up.) Other Nintendo curios surrounded our hero – a model warp pipe here and a Famicom karaoke system there. Then, the piece de resistance: a Famicom Box. (Not a Famicom box, you understand, but a Famicom Box.) This beast was running Super Mario Bros. but it had the capacity to play any of ten carts that were queued up within its gargantuan hull.

Around the corner was a sore sight for our eyes: a Famicom Disk System carved in two, to show the workings of this intriguing platform. Beyond that, there was relief in the form of wax: a selection of videogame vinyl cuts including such marvels as Tecmo's greatest hits and analogue versions of the recent Famicom Music collections. Lovely.

Deeper into Super Potato, we found a duo of arcade cabinets, one of which was playing Ganryu. Some thought has obviously gone into the shop floor layout, as these arcade machines are surrounded by Saturn, Neo-Geo, Dreamcast, Megadrive, Master System and PC Engine sections. The arcadey stuff is all together.



The most expensive Saturn title in Super Potato 7 – no, the most expensive anywhere, ever – is marked at Y102,900 (just £515). It is called Waltz. And we have no idea why it's so surreally expensive, as it's a mah jong game! But there it is, sat right next to the second most-expensive Saturn title we've ever seen, a game based on a Japanese quiz show, which is available for Y83,790 (£420). Sheer madness.

Back in the real world… the Master System stock here is superb. Besides a stack of minty fresh mark one Master System consoles, Super Potato 7 has pristine examples of pretty much every Master System title you'll ever want to play. We left Super Potato with a couple of Ganbare! Goemoni titles and a Konami 12in, and walked down the street to Super Potato's friendly neighbour and partner in crime.

This is the daddy. Two floors chock full of everything a retrohead could ever possibly desire, and more. The most comforting thing about Retro TV-Game Revival (aka Super Potato) is that only commercially obsolete formats are carried. The most impressive aspect is the sheer volume of stock housed here. In all likelihood, tens of thousands of games (and thousands of systems) are stocked at Game Revival. It's as much of a museum as it is a mere shop.

For instance, there is a music section on the ground floor which holds hundreds of videogame music CDs. Chances are, if you want the soundtrack to an 8-bit wonder, it can be found here. And at a decent price, too: most of these music CDs go for Y2,000 (£10), despite their age and scarcity. At that price, the OutRun soundtrack is arguably more essential than Revolver.

Elsewhere on the ground floor, a formidable Super Famicom range spawned a perfect example of Super Metroid for just Y780 (£4), which, of course, we picked up. Upstairs, our Gunpei Yokoi commemoration was augmented with the purchase of a WonderSwan and Yokoi-san's last game (appropriately titled Gunpey) for a ludicrously low price of Y480 (£2.50). Bandai's dormant handheld format in its original form is a nifty little system, and Gunpey is as superbly addictive puzzle game. Bargain.

A Virtual Boy demo pod is installed on Game Revival's first floor, right next to a UFO Catcher at which it is predictably impossible to succeed. Famicom posters and shoppers' artistic contributions are plastered on the walls. And another Golden Mario stands proudly overlooking Retro TV-Game Revival's expansive Famicom cartridge collection. A figurine stands before a Vectrex, and a pre-videogame arcade machine, Irem's mechanical Climber adds context.

This should serve as a template for any Westerner planning to establish a retro games emporium – build the atmosphere with small touches before you buy the stock. We left Osaka happy and contented and immediately started making plans to return. But before that, Tokyo.



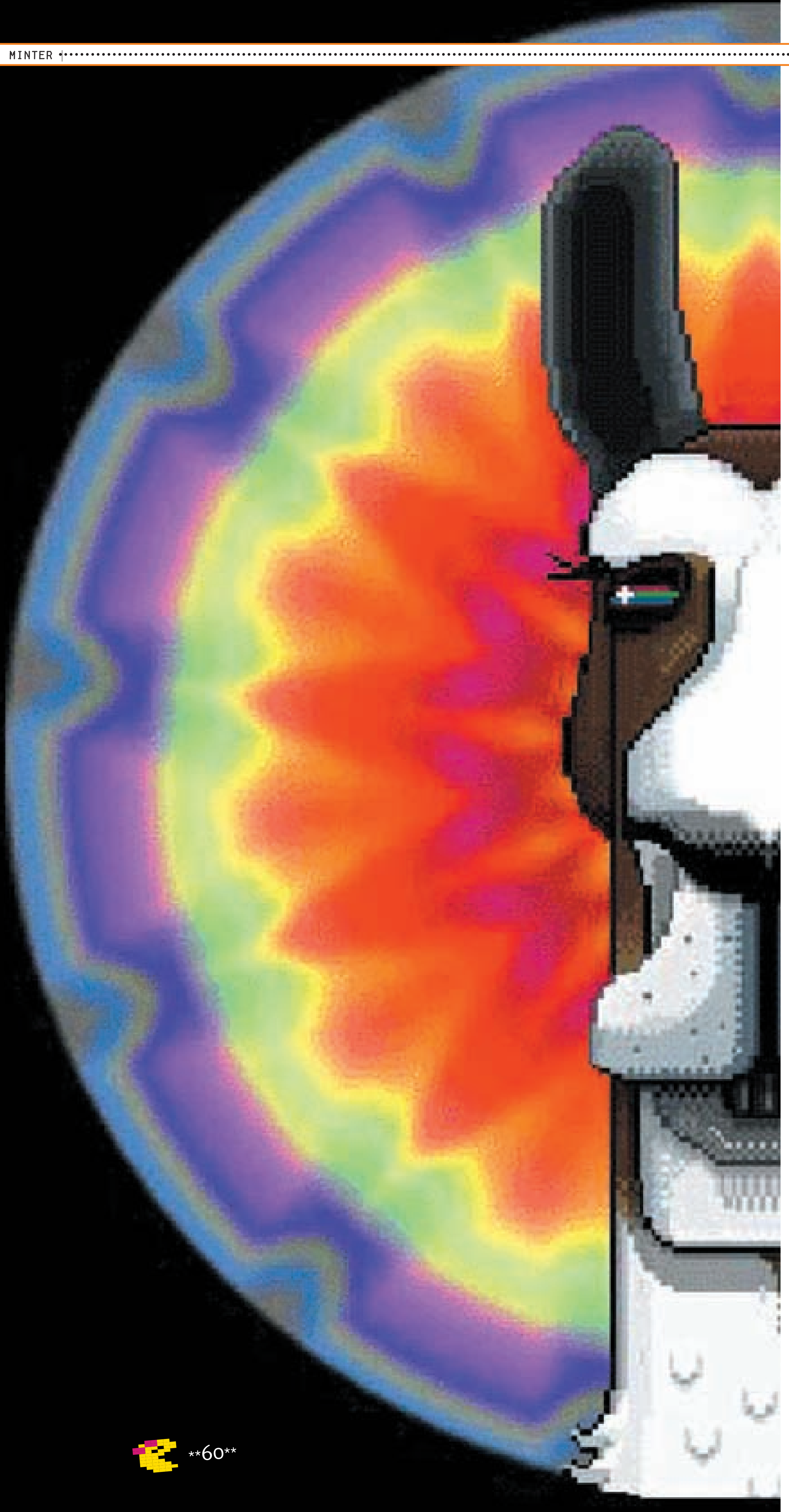
Would you believe it? Retro Gamer on sale in Japan. And yet some people claim it can't be found in Sheffield!

Next month: Tokyo

Check back next issue for the full details of our trip to Akihabara, Tokyo. A taster: we found Retro Gamer on sale in Akihabara at Messe Sanoh, an import store (from the Japanese perspective). It is, according to the staff, very popular with Japanese readers. So there you have it. Until next time. RG*



eMag



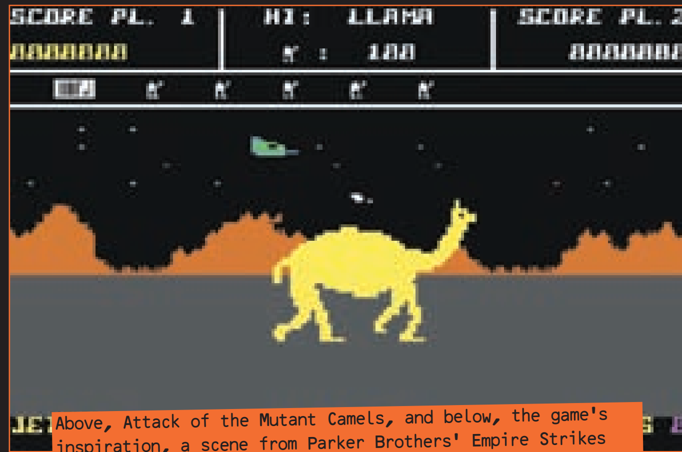


>Clearly Minter

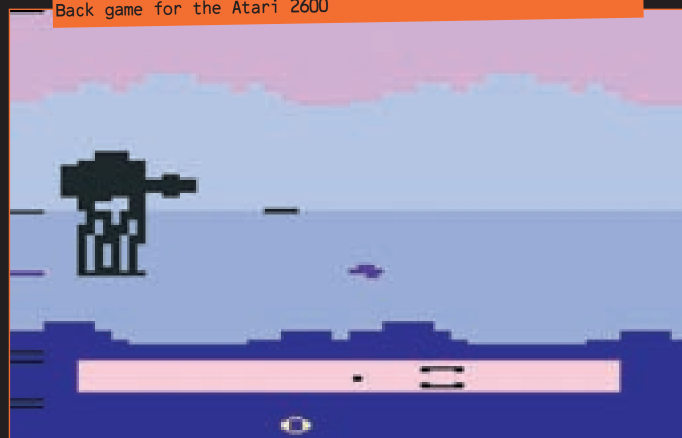
Jeff Minter is impossible. He shouldn't still exist. For over 20 years he's been programming the most energetic, personal, fun and eccentrically llama-based games. And he's still doing it. No multimillion-pound development studio, no teams of junior programmers, just him, some furry beasties, and the machine. And the odd curry. With the complete Llamasoft archive due for release in the summer, and the definitive history written by the man himself still unravelling at the Way of the Rodent webzine (**www.wayoftherodent.com**), Andy Krouwel looks back at the life and career of one of Britain's software treasures

In 1981 Tadley, Hampshire was famed only as a centre for making the besom brooms so favoured by witches, and for being near Basingstoke. Strange then that this name would be etched indelibly in the memories of school kids and teenagers the length of the country. But this was where Jeff Minter lived. This is where you sent off for the latest game or the *Nature of the Beast* newsletter. This was the home of Llamasoft. And it was mainly due to illness.





Above, Attack of the Mutant Camels, and below, the game's inspiration, a scene from Parker Brothers' Empire Strikes Back game for the Atari 2600



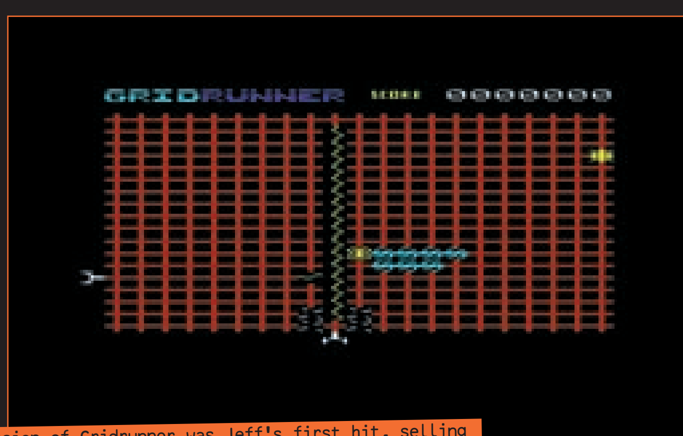
Illness was what stopped Jeff from getting very far into his Polytechnic course, or anything energetic in fact, and convinced him to give computer games a serious go. It was one of the things he could do whilst recovering. He'd already "had a few bad experiences in the games biz", as he describes the ZX81 games he published through Dk'Tronics, and founded Llamasoft "to release stuff that I was happy with for reasonable prices."

"I always make games that I want to play," says Jeff, "and I don't want anyone to be disappointed, having bought one." He didn't ever think that it would go anywhere.

He began with a Defender clone on the VIC-20. Originally called Defenda, when it became clear that this cunning ruse was unlikely to fool Atari's lawyers for long it was changed to Andes Attack. The humanoids had to be changed to llamas, obviously, or it wouldn't have made any sense. Selling it from a table at a computer show, he didn't expect much response. He was therefore somewhat surprised when he sold the lot in the first morning. And immediately secured a licensing deal to sell a cartridge version in the US. Not bad going. He's still somewhat embarrassed about it, but it was a respectable game at a time when they were rare beasts. And it sold respectable quantities and made respectable money. Jeff, also known as Yak from his arcade high score table initials, thought he might be on to something here. He began selling games by mail order, and the name of Tadley began to spread.

His first real success would also be his own interpretation of a classic. He'd already written a ZX81 version of Centipede, which was surprisingly good considering he hadn't played the arcade version. And that it was on a ZX81. For the VIC-20 he wanted a less cutesy version, and knocked something up in a week, naming it Gridrunner after Ridley Scott's popular, but notably centipede-free film, *Blade Runner*. His American distributors loved it, and kindly phoned him up at four in the morning to tell him so. A large number of other Americans liked it too, but fortunately they didn't all feel the need to phone. They did buy it in huge numbers however, sending it to number one in the VIC charts and putting Llamasoft on a firm footing. "Best week's work I ever did in my life," he says, not unreasonably.

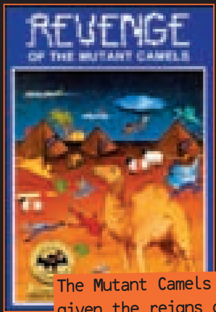




The VIC-20 version of Gridrunner was Jeff's first hit, selling particularly well in the US

Mutant Camels

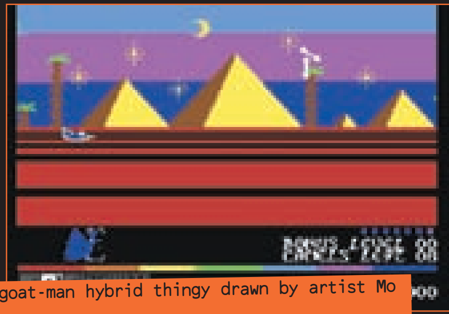
The Commodore 64 was a natural next step, and proving that inspiration can come from the oddest places, Llamasoft's next major hit was inspired by a game review of a film licence. The film was *The Empire Strikes Back*, the game was from Parker Brothers, who can't have been overly happy at having its AT-AT graphics described as giant mechanical camels in the review. Actually, as it was on the Atari VCS they were probably flattered it was recognisable as anything at all.





The Mutant Camels returned in 1984, and this time you were given the reigns of one of the furry beasties





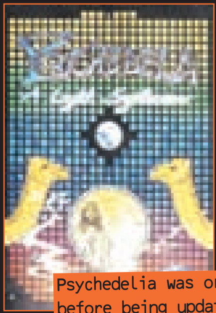
Batalyx, with its goat-man hybrid thingy drawn by artist Mo

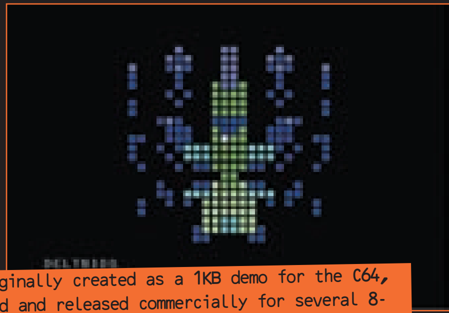
Anyway, Jeff just cut out the middleman and made a game with camels, of the giant mutant variety rather than mechanical. They also had the added advantage of being easy to draw. Attack of the Mutant Camels was another hit in the UK, but there was some confusion in the US and somehow the same name was used for Gridrunner sequel Matrix.

The C64 represents Llamasoft's golden age to many, and Jeff began producing completely original games, such as the Revenge of the Mutant Camels. They don't come much more original than that, featuring various beasties, Austrian skiers, phone booths, roll-ups and even many mini Minters. There were more frantic shooters, more beasties, and complete tangents such as Hover Bovver (see box on left). Some were too radical, and difficult, for popular tastes, such as the split-screen scrolling of Iridis Alpha, or the punishing Mama Llama (see box overleaf). There were also ports to other platforms, with friend Aaron Liddiment handling some Commodore 16/Plus 4 and Atari versions, and Salamander Software's Chris Clark covering the Spectrum. Jeff was also beginning to recognise some limitations in the art and music departments. Artist Mo Warden got a job after she sent Jeff a sketch for a half-human, half-goat creature from Brian Aldiss' Helliconia. The creature, and the sketches, were called Batalyx. "From the reaction, Jeff must have fallen off his chair when he saw them as he was using Batalyx as the working title of his next game, but hadn't mentioned it to anyone." Illustrator Steinar Lund also came on board to improve Llamasoft's 'interesting' homebrew packaging.

Scene stealing

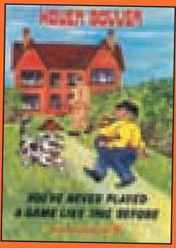
Following early game successes, Jeff started a distinctly different strand to his work. As part of the Compunet demo scene he'd tinker with little ideas then upload them for others to play. One little program he came up with was the





Psychedelia was originally created as a 1KB demo for the C64, before being updated and released commercially for several 8-bit platforms

>Hover Bovver



C64 version, 1983

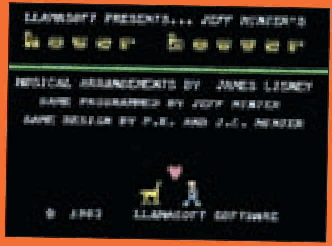
Not your typical Llamasoft game this. It doesn't feature many of the usual beasties – just a daft dog. Clues are there though, with a llama on the title screen, and a llama-shaped flowerbed as one of the levels. Neither is it at Jeff's normal, frantic pace. The Idea was in fact co-developed with his dad, based on a conversation over breakfast in a Birmingham guesthouse. There was very nearly a tie-in with Flymo, but they pulled out at the last minute leaving Jeff to rename everything 'Airmo'. Luckily he got to keep a free lawnmower, which was used to decorate a show stand. So that's alright then.

It's essentially a maze game, and close to Pac-Man in both approach and its wide appeal. Your task as horticultural recidivist Gordon Bennett is to mow a series of lawns whilst avoiding having your 'borrowed' mower repossessed by its original owner. You are helped and hindered by your daft dog, who careers around randomly until he gets annoyed with the mower. He then homes in relentlessly and tries to bite the thing. Mow over the flowerbeds and you'll also incur the additional wrath of the gardener. Through cunning use of hedges, flowerbeds, and dog positioning, you can trap your opponents and continue your mowing in peace for a while. And if that fails, you can set the dog on them. It's what fire buttons were invented for.

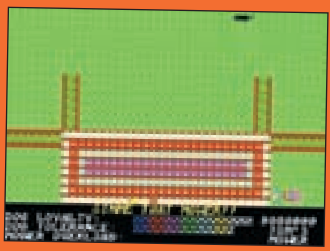
Presentation as always was excellent, with animations before each 'life' showing you obtaining your mower from a very suburban-looking house. There was also a full musical score. Jeff's college mate James Lisney's jaunty arrangement of *English Country Garden* is unforgettable. Sometimes so unforgettable that it keeps running around your head when you've finished playing. Jeff soon learned to keep the game music quiet after listening to it all day at a show. You have been warned.

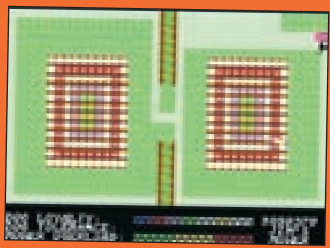
Despite its deviations from the beastie formula and its relaxed pace, Hover Bovver contains many of the typical Llamasoft elements. It is eccentrically British. What other nation could possibly produce a lawnmowing game? Hover Bovver sparked an entire garden game genre. It also takes a number of simple rules, and makes something challenging, satisfying and fair. It's easy to see how the neighbours, the dog and the gardener move and interact. It's the challenge of using that knowledge that makes the game.

Hover Bovver has proved perennially popular, and Jeff started, but didn't complete, Intellivision and GameBoy Color versions. It was one of the titles picked for an iDigicon remake, and sequel Hover Bovver 2 is available for PC and Pocket PC. Keeping the same design elements, it's a surprisingly different game. Faster to play, and with more pick-ups, its highly enjoyable in its own right.









>Mama Llama



C64 version, 1986

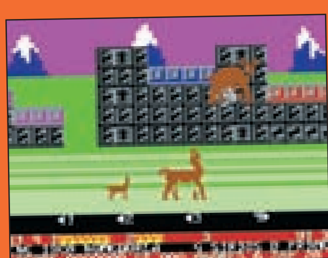
In a similar vein to Revenge of the Mutant Camels, Mama Llama contained a number of innovations, but also marked a turning point in Llamasoft games. Generally considered the hardest of the bunch, there were very polarised reactions. "It's one of the least loved, but also very loved because it's so bloody hard," as Llamasoft archivist Mark Rayson puts it. The learning curve is certainly cliff-like, and Jeff now admits it might be a little difficult. It's certainly not the first Llamasoft game you should ever feel like trying. At the time Jeff described it as "like acid rock in the 60s... weird experimental stuff that was definitely not chart music," an apt comparison that is as true today as it ever was.

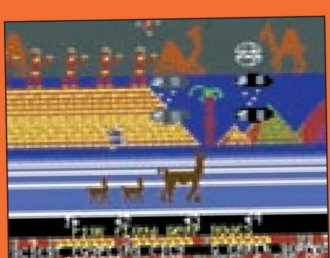
It was certainly an extremely original game packed with novel concepts. The most obvious experiment was the 'Killdroid' system, an invincible satellite that you could steer around to protect your llama family. The game was originally designed to use traditional bullets, but that just didn't sit well with the inertial motion routines used in every other object. Having the user control the Killdroid satellite directly provided a consistent, inertial answer, and a spiritual link to shooters such as Radius. If you had difficulty controlling the game, you could choose between the different characters that varied the gameplay settings until they were more to your taste.

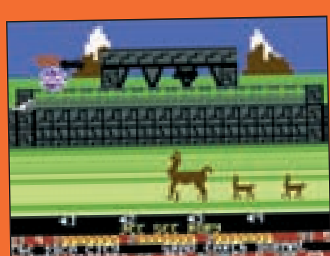
The way you approached each level was also a game in itself. It was, quite literally, not as linear as previous shooters. Instead of being presented with the levels one after the other, as in Revenge, the chosen level was based on a grid of a hundred sectors. Not only did this give you some control over what you got to fight, but there was also an added layer of strategy. As you moved through the game and completed levels the density of aliens in all the other sectors would increase. This allowed you to choose to tackle levels you found difficult early on, before the level of opposition built up too much. You could also skip certain levels altogether, or apply bombs to control the level of opposition in a sector before you even arrived. This level of player control over the game was unprecedented, and would be highly unusual even by today's standards.

Despite all this assistance however it's far beyond our mortal playing capability. "My highest on Mama Llama is maybe 10 levels" admits Mark. So how is the walkthrough for his archive going? "We have a guy who's videoing now. He's basically got 80% of Mama Llama complete on video. That's bloody good." We'll say.







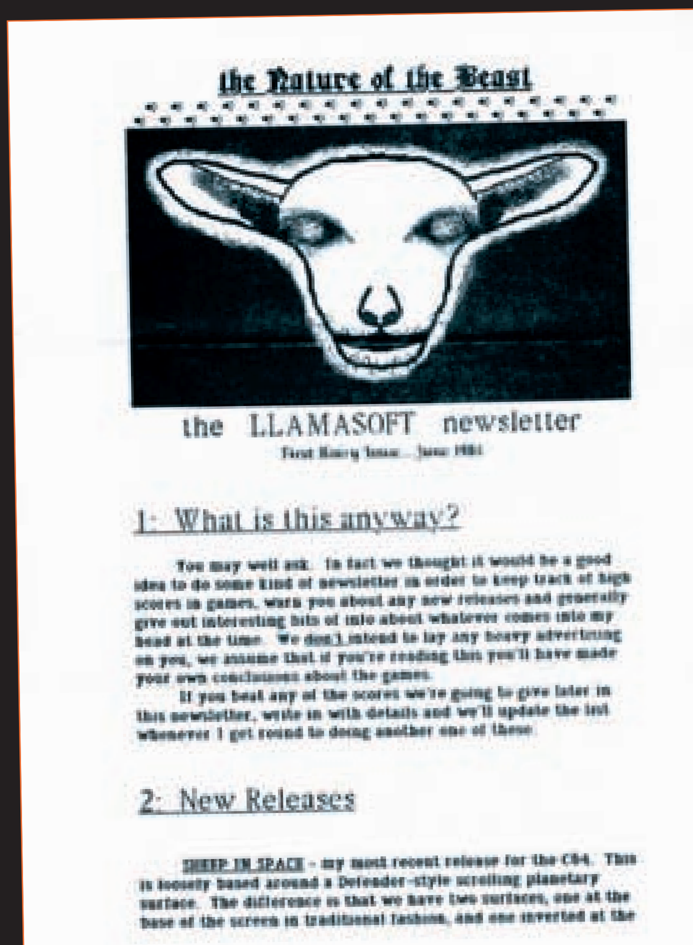




Jeff Minter playing the unreleased Mutant Camels '89 in the space-age Konix Power Chair

realisation of an idea that had been bouncing around in his head for years. It was interactive, but not a game. It was musical, but didn't make sounds. It was something new. It was colours and patterns that you could 'play' along to music. It was Psychedelia.

With the right music and plenty of, um, Vimto, the effects came alive – an otherworldly visual interpretation of what you were hearing. That first program, published originally as a magazine type-in, would start another 20 years of experimentation. Colourspace on the Atari dazzled watchers with images that didn't seem possible. Eventually this technology would be used by The Virtual Light Company to provide large-scale light displays for the likes of The Shamen and Primal Scream, as well as feeding back



the Nature of the Beast

the LLAMASOFT newsletter

1: What is this anyway?

You may well ask. In fact we thought it would be a good idea to do some kind of newsletter in order to keep track of high scores in games, warn you about any new releases and generally give out interesting bits of info about whatever comes into my head at the time. We don't intend to lay any heavy advertising on you, we assume that if you're reading this you'll have made your own conclusions about the games.

If you beat any of the scores we're going to give later in this newsletter, write in with details and we'll update the list whenever I get round to doing another one of these.

2: New Releases

SHEEP IN SPACE - my most recent release for the C64. This is loosely based around a Defender-style scrolling planetary surface. The difference is that we have two surfaces, one at the base of the screen in traditional fashion, and one inverted at the

The first issue of Jeff's *Nature of the Best* newsletter. You'll find the first 10 issues on this month's cover CD



Jeff's amazing Tempest games were perhaps the only worthwhile reasons for owning a Jaguar and a Nuon

into home-based Virtual Light Machines that, for reasons we'll discover, not many people ever got to use.

In 1984 Jeff also started his *Nature of the Beast* newsletter to keep in touch with his growing following of fans. Write to Tadley, and you'd receive free copies of Jeff's informal musings. The 13 irregularly produced issues brought fans into Jeff's world and are as fondly remembered as many of his games. We've dragged them across time itself, and placed them on the CD for your viewing pleasure.

Jeff was also a natural for the new breed of games magazines. He started writing a regular column in newly founded *Zzap! 64*. Described as "hairy, freaky, hilarious, unorthodox, irreverent, controversial," he tackled various niggles including the distribution problems that would sadly never leave him. Unfortunately, there was a disagreement over the low review scores for Mama Llama in the very first issue, and this wasn't helped by Jeff's description of the new publication in *Nature of the Beast* as "OK, not brilliant" containing

>Gridrunner++

PC/Mac, 2002

Jeff's most recent game, and one of his most playable and accessible. If you've never experienced Llamasoft, this is an excellent place to start, showing that the ideas that have been powering Jeff's games for over 20 years are still going strong.

This is only the most recent in the long and distinguished Gridrunner series, originally inspired by a desire to make a not-so-cutesy version of Centipede. You'd be hard pressed to spot the influence now. It keeps the archetypal Gridrunner X-Y Cannon. firing regularly to keep you on the move, and the main enemies are vaguely centipedal, if that's a word. But there's typical Minter diversity and humour to be found. This time you'll be battling everything from footballs to giant Mutley heads, and will see many familiar symbols and characters along the way. Of course, there are also sheepies to save, or be saved by, who will lend a helping, er, hoof. Eventually you'll get an ever so useful sheepie head for backup. Nice. This is pure shooting in action, and all the better for it, and with the dying creatures leaving a legacy of laser mines to be mopped up sharply if you don't want the screen filling with deadly unpleasantness, you have to be on your toes.

Although it gets pretty hairy (how did we get this far without saying that?) at times, the influence of Jeff accessibility is clear. The controls use the mouse and do away with manual firing of the main gun altogether. And it works splendidly, removing the need for the costly RSI treatment you'd need to pump out that volume of shots by hand. So well does it work in fact that we didn't even notice the high-powered zapper smart bomb until well into the game. It's the right mouse button, if you were wondering. Couple this with different game modes, starting from any level you've seen, continuing from your 'best' point, and the useful power-up recovery method to save embarrassing sheeplessness, and you've got a game that challenges rather than frustrates. It's truly a player's game, and we would recommend that everyone gets a copy. It's the best value ever, as its only a fiver.



"reviews reading like they were written BY 12-year-olds FOR 12-year-olds". Oddly, Newsfield wasn't happy and the column was banished after only three issues. Relations remained sticky for several months, until Batalyx appeared and received a Sizzler award from the magazine. Julian Rignall signed off his comments with a sly "It's HYPER BRILL, okay twelve-year olds?" and soon Jeff was back with a developer's diary for Iridis Alpha.

The next major sighting of the wild Yak would be in Wales. Jeff had moved there in the last years of the C64 era (correspondence via Tadley, please) and by some quite incredible coincidence this was suddenly the home of the next wave of arcade games for the home. It must have seemed like fate. The radical Konix Multi System (see Retro Gamer issue eight) even looked liked a sheepie's head, when the handlebars were extended. Well, a bit.

In the late eighties Jeff could be sighted in magazines and at trade shows riding the wild Konix Power Chair. Until it broke down. Unfortunately Konix went the same way, and Jeff was left holding a nearly completed Mutant Camels game for the greatest console that never was.

The Atari era

Unfortunately, Konix wasn't the only problem for plucky Llamasoft at this time. There was no problem with putting together a new game – the excellent Llamatron for the Atari ST was finished – but Jeff couldn't get anyone to distribute it.

So he gave it away. Easy. He added a nice little file explaining the concept of 'shareware' and suggesting you might like to send a cheque for a fiver to Tadley, if you liked the game. It worked. Thousands sent in payments, and their stories, from toddlers to pensioners. "I still get emotional about it to this day… It was the goodwill of people that saved Llamasoft," as Jeff later put it. A small company called id would later try the same technique and achieve some moderate success with Doom.

Soon afterwards Jeff again attracted the attention of a publisher, Atari, who agreed to release Atomic Tadpoles vs. Savage Mutant Weirdoes from Basingstoke. Only if he renamed it Photon Storm, though. Bah. Jeff would stick with Atari for many years, producing games for the ST computers. Jeff's desire to work on the latest hardware, coupled with Atari's unfortunate ability to cancel or not sell its latest hardware, lead to a quiet time for public releases. The TT030 and Falcon were released, but passed without much notice. The Panther didn't even get that far. Yak would come back into the public eye riding Atari's next big cat: The Jaguar. Meow. This would even tempt him to relocate from rainy valley to Sunnyvale.

Jeff's Jaguar version of Tempest 2000 is now legendary, but incredibly he didn't have access to an original Tempest machine for reference. We know it's difficult, and your kids might not believe your crazy dad-rambles, but once upon a time MAME didn't actually exist. The version of the 'original' included with Tempest 2K was mostly from memory, which would explain some of the differences. The Jag also received a Virtual Light Machine for its CD player, and Jeff's less well known Defender 2000, but these couldn't prevent it being flattened by an oncoming PlayStation.

Despite several job offers with large companies, one promising "a llama upon initial signing, with the option of a yak after six months" Jeff went underground and wouldn't be seen again for a few years, until he cropped up again in Wales. Sunny California just couldn't compete with the weather, the curries, the beer and being back with his beasties.

The secret project turned out to be Nuon, a console hiding in a DVD player. Jeff provided Tempest 3000 and an updated Virtual Light Machine. Unfortunately, people preferred DVD players hiding in their consoles, and Nuon failed to get very far. Nowadays Tempest 3K is about the only reason to own one, although opinions of it vary, with some highly impressed with the refinements over 2K, and some contending that there is too much visual clutter and the changes ruin that game's balance. Either way, it'll take you a lot of money to find out for yourself. To get a Nuon player you'll be lucky to see much change from £200. You could try emulation, and Nuance is Tempest 3K compatible, but you'll have to find a fast enough PC, which may require a time machine, so £200 begins to seem quite reasonable.

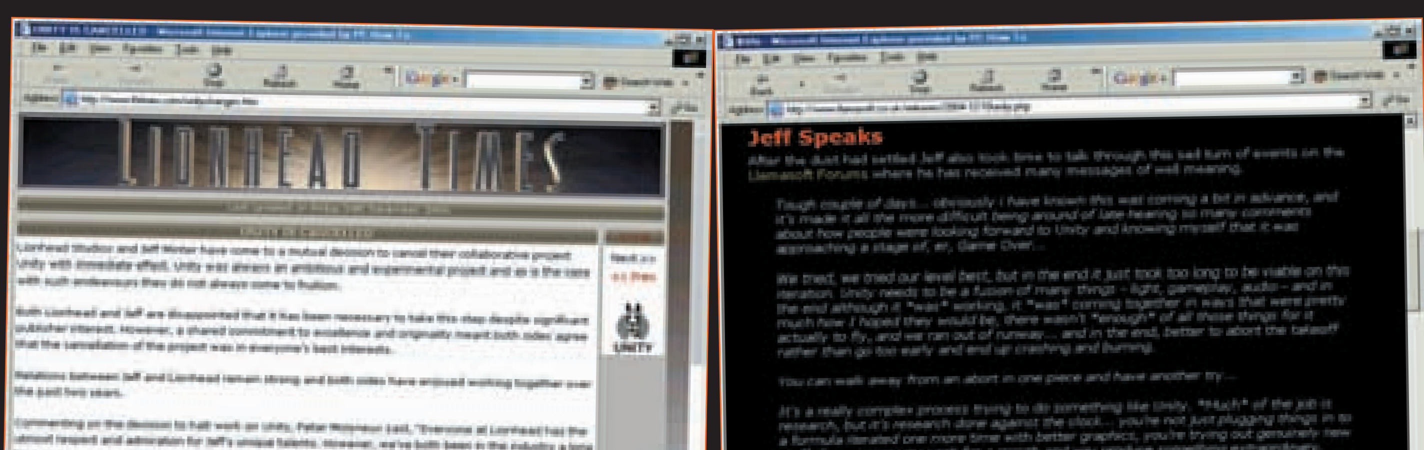
And so Jeff began again, with (Gnu) Llamasoft. In no time at all there were Pocket PC and PC versions of Deflex and Hover Bovver 2, and then the excellent Gridrunner++ (see box on previous page). Demos were on the now established shareware model (and on our cover CD). Full games are still just a fiver. That's right, the same price Llamatron had been all those years ago.

Showing Unity

Goodwill kept Jeff afloat until help arrived from an unexpected quarter. Peter Molyneux's studio had heard that he was available, and wondered what his plans were. Jeff described an idea that had been kicking around in his head for a few years: to fuse the two main strands of his development – manic shooters and light synths. The name? Unity. The studio liked what it heard, and so it came to pass that the Lionhead did lie down with the Llama. Jeff's future was secure, and set up with a GameCube development kit and the resources of Lionhead behind him, the future was bright.

Which should bring us neatly to a happy ending, with the imminent release of the game that will unify the diverse strands of over 20 years of gaming heritage. It would prove that one man could still make the game, and that the industry is still receptive to the kind of endearing, quirky, personality-filled games so many of us long for.

It isn't going to happen. Unity has just been cancelled. It just wasn't going to work out in time. Once again Llamasoft is looking for a new project, but Jeff seems upbeat. When we asked him about his future plans his reply was typical for the man who has been through so much. "Pretty much the same as always – develop more games, work on lightsynths. Maybe buy a donkey." Well, whatever his next project turns out to be, it'll be furry, funny, eccentric and unique – just like its creator. RG*



News that Unity had been canned was first announced on the Lionhead website. Jeff has since posted his comments about the cancellation on his own site (www.llamasoft.co.uk)

>The Yak community

No history of Llamasoft could be complete without talking about Jeff's flock of fans: the Llamasofties. Jeff has always been close to his fans, and the Internet has brought even more of them together than *The Nature of the Beast* newsletter. Llamasofties are an active, creative bunch who have produced many projects and spin offs with a separate and distinct life of their own. Here is just a selection.

YakYak

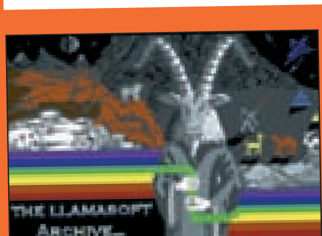


www.yakyak.org

The YakYak forums are the place to talk all things Llamasoft and beyond. You'll find Yak there most days, along with pretty much everyone else mentioned here. The forum is a natural successor to the original *Nature of the Beast* newsletters, and his pre-blog blog, the Grunting Ox. It's a very welcoming community, and with regular socials, meets and contributions and collaborations with the projects below, it's very busy. Started to run alongside the Nu-Llamasoft website, it now has over a 1,000 members, and has grown beyond the original brief.

Its popularity even surprised Jeff. "I honestly thought we'd get about 50 members tops," he recalls. Not that he's unhappy. "It's an entity shared between the members in its own right, and I think it is probably the best thing ever to emerge from Llamasoft games."

Camels at the Edge of Time



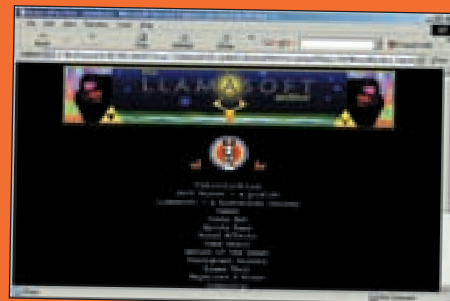
www.llamasoftarchive.org

This year will see the re-release of the complete Llamasoft archive, Camels at the Edge of Time. Cateot to its friends, it began at the end of the last millennium when Justin Leask was making a repository for Jeff's *Nature of the Beast* newsletters. He linked up with Mark Rayson, who had also started putting together some archive material. Together they thought the combined material should go further. "Let's create an archive of exactly what Llamasoft always has been since 1981" as Mark puts it. A simple idea, but as it turned out, this would go an awful lot further.

Working together they produced the first archive, christened it, and unleashed it as both an archive CD and website in 2002. As well as the *Nature of The Beast*, the original site contained several sections of Llamasoft games, of course, which Jeff kindly released to the public domain at the end of 1996, and accompanied them with a few SID tunes, some type-in pokes, a game high-scores table, and the instructions for Jaguar VLM and Colourspace.

There was more missing than present however, and appeals went out for material to plug the holes. And plugged they were. Hosting problems caused the original site to be moved to the care of Stephen Morton (aka MedwayPVB), and provided a chance for a redesign. This is now nearing completion, and the re-release is scheduled for the summer.

There will be two forms of the archive. The Internet version will be open to everyone, and for the dedicated there will be an enhanced DVD release. What's in it now? According to Mark, it's *complete*. "Every single game, every single sound effect, every single sprite, every single cover scan, every single instruction scan, every single *Nature of the Beast*". And if that's not enough there will be magazine articles, adverts, and early Compunet and graphics demos. And the walkthroughs. Mark? "We're going to feature every game screen from every [Llamasoft] game ever written". Ambitious? "There's a 100 levels in Ancipital. There'll be three pictures



from each level."

But this is just the Internet version; the DVD will go even further. As well as additional special features, including such minutiae as pictures of Jeff's original development machines, there will be video walkthroughs. For every level. Of every game. Ouch. Quite a task putting that lot together, but for Mark, PVB and the volunteers of YakYak, it's a pleasure.

Retrovision



www.retrovision.org

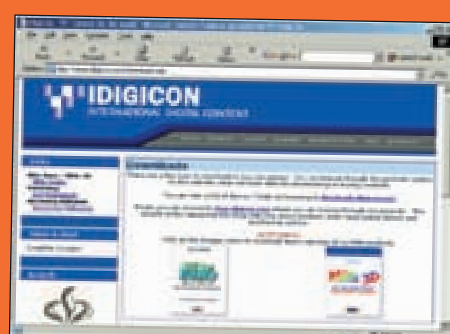
Not content with his archiving, Mark Rayson has added another colour to his head. He's founder and organiser of one of the biggest retro gaming events in the UK. And once again Llamasofties have been involved from the very early days.

RV started in late 2001 in Oxford, a combination of Mark's 15 years of collecting consoles and arcade cabinets, a pub basement with many electrical sockets, a bottle of wine, and an enthusiastic response from YakYakers. It was a free day of play, or £3 to non-Llamasofties. Organised in only three months, the response was heartening; some turned up with their own consoles, and even cabs, in tow. Yak came along to play, drink and mingle.

The RV motto is 'we came to play', and that's what it's all about. Getting your hands on the machines, playing the old games and having a laugh while you do it. Alternating between public and special Llamasoftie events, RV has expanded every year and has taken on a distinct life of its own.

RV 5 will be the biggest yet. Four days of play, plus an expanded musical link up with Back In Time. And as usual Jeff and the Llamasofties will be in attendance. It's being held from 11th–14th of February, in Frome, Somerset. If you hurry to the website, there may still be some tickets. Look out for Mark. Can't miss him. Guy with the green head.

Remakes



www.idigicon.com

In 2000, long-time Llamasoft fan George Bray thought of an excellent use for the new Blitz Basic package that his employers Guildhall Leisure were distributing. He'd been in contact with Yak for several years, discussing aspects of the games industry and previous projects, but now he suggested remaking the Llamasoft back catalogue for the PC. "If you're serious, yeah," was the response from Jeff, which resulted in Blitz-coded versions of Gridrunner, Hover Bovver, Ancipital, Revenge of the Mutant Camels II and the tricky Iridis Alpha. The remaking program is going well at the now-renamed iDigicon, and has expanded to non-Llamasoft games such as Elite's Kokotoni Wilf and Dr Franken, and George is now looking for more games to remake. So if you're a successful 80s' game designer, why not drop him a line? Demos for the iDigicon remakes can be found on the cover CD.



>Plug and Play

The Commodore 64 could load its software from three different formats - tape, disk and ROM cartridge. The cartridge format offered the benefits of fast loading and protection from piracy, but at a higher price. As many cartridges are now rare and highly collectable, Andrew Fisher (ably assisted by Mat Allen) looks at their history, from the earliest games to the C64GS console that brought the cartridge back into use

The Commodore 64 usually starts up with a blue screen, telling you it's running C64 BASIC. From the 'ready' prompt you can then load your software from tape or disk. However, if you have plugged a cartridge into the correct port (on the back of the machine nearest the power input), when you turn on the C64 it will recognise that a cartridge has been inserted and override the normal start-up sequence. The software stored on the cartridge's ROM will then load almost instantly, before you could even press play on tape.

Cartridge crazy

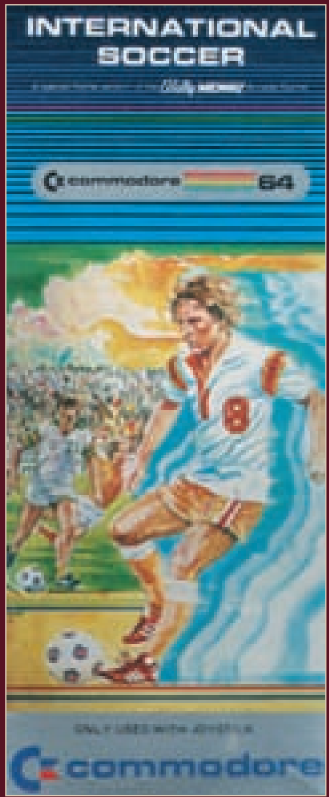
Firms such as Sega, Atari, and Commodore themselves made games available in the cartridge format. Early cartridge games like Battlezone, Robotron and Star Wars (using sprites for the wire-frame enemies) reflected what was popular in the arcades. Perhaps best remembered is the classic International Soccer, written by Andrew Spencer back in 1983 and still playable to this day.

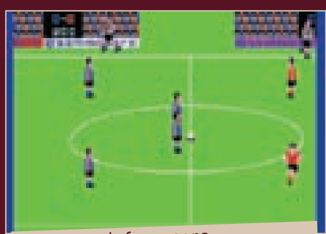
It wasn't just games that were available on cartridge. In 1983 Commodore released a cartridge entitled Simons' BASIC (named after the programmer David Simons) which added over one hundred commands to the limited BASIC of the C64. This allowed you easier access to the advanced graphics and sound capabilities – but would only work with the cartridge in place. Memory expansions were also released, plugging directly into the cartridge port. Commodore released the first such cartridges, called Ram Expansion Units (or REU for short). There were three main versions: the 1700 (64Kb of RAM), the 1764 (128Kb) and the 1750 (512Kb). The 1700 and 1764 were marketed at C64 owners, as it was thought that only C128 owners would want 512Kb of RAM. Berkeley Softworks, who created and published the GEOS operating system, later developed the cheaper GeoRAM cartridge. It could not do everything that the Commodore REU could, but was specifically designed to work with GEOS thanks to a special boot disk that was bundled with it.

A very popular cartridge was Game Killer, which featured on the BBC TV show Micro Live. Plug the cartridge in and it disables sprite collisions. However, this method of cheating doesn't work on every game – only those that rely on the in-built collision detection routines of the machine.

The big development came in the form of 'freezer' cartridges. Whereas the Spectrum and the Amstrad had the Multiface, the C64 was blessed with Freeze Frame, Super Snapshot, Isepic, The Expert Cartridge, and the daddy of them all, Action Replay from Datel Electronics. The first freezer cartridges could only break in and save a copy of memory to tape or disk. Later versions added a monitor for examining code, routines for transferring from tape to disk, an editor to change a text screen (high score tables beware!) or to save out a bitmap.

Action Replay was consistently the biggest seller, going through numerous revisions and including the most used facility – the Pokefinder for uncovering cheats. However, The Expert Cartridge from UK company Trilogic had one major advantage over the competitors. As new protection systems were developed, new ways of hacking into them were found and the Expert could be updated with special software. The American





For a good few years International Soccer was the best footy game available for the C64



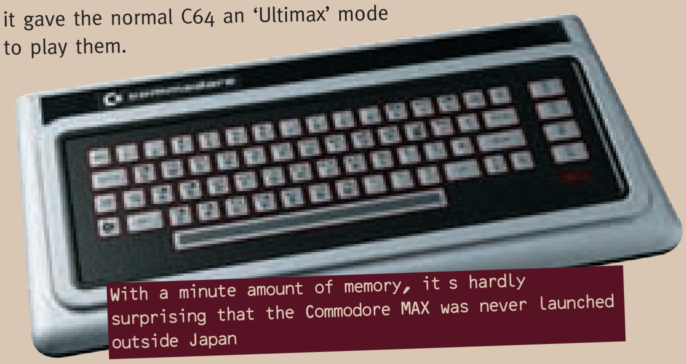
Add go-faster stripes to your Commodore by plugging in a RAM expansion pack



The adverts promised a lot of features, and Action Replay delivered in spades

>Max power

Back in 1982, there was another machine from Commodore that could use these cartridges – the Commodore MAX (or Ultimax, or VIC-10, depending on where you look). It's basically a cut-down C64, with the same graphic and sound chips, but with a full-sized membrane keyboard and only 2.5Kb of RAM. It came with no internal BASIC/OS, so it does not work at all without a cartridge plugged into it. Curiously, the MAX was launched at the same time as the Commodore 64 in Japan, but poor sales meant it never officially reached Europe or the USA. HAL Laboratories (who went on to create many Nintendo games) programmed many of these Japanese-only releases, and Commodore wanted to sell them in the West. So to avoid having to reprogram them, it gave the normal C64 an 'Ultimax' mode to play them.



With a minute amount of memory, it s hardly surprising that the Commodore MAX was never launched outside Japan



Like the Amstrad GX4000, the C64GS failed to challenge Sega and Nintendo s dominance of the console market

Super Snapshot cartridge, meanwhile, had some of the best features, including a character set monitor and a tool to search memory for sampled sounds.

The utility cartridges proved popular, but the format never really took off as a means for storing games. The main drawback was the price. At £15 and upwards, cartridges were expensive compared to the extremely popular tape format, which was undoubtedly helped by the fledgling pirate scene. Another problem was that these early cartridges contained just 4Kb, 8Kb or 16Kb of ROM, so games were limited in size and scope. And as the latest titles became larger with extra sections loading from tape or disk, the high cost of development and production signalled the end for cartridge games.

Game on

The early 1990s saw a new wave of cartridge software, heralded by the arrival of the Commodore 64GS console. Jon Twiddy and Mev Dinc (who worked on the Last Ninja series for System 3) created the development system for a new generation of cartridges with memory sizes up to 512Kb. Larger games were now possible, and the long wait for tape or disk to load a new section was eliminated.

With the Commodore PR machine rolling, over 100 games were promised for the C64GS. At first many C64 owners thought that the new cartridges would only work on the GS, resulting in later titles having stickers on the boxes explaining they would work on any C64 model.

The console came with a four-game compilation cartridge and Cheetah Annihilator joysticks, which featured a second fire-button (this was designed to allow more complicated control methods). The four games included were International Soccer, Klax (converted from the arcade game), Flimbo's Quest (a cute platform game) and Fiendish Freddy's Big Top O' Fun. This hilarious circus game had already been a hit on the Amiga, and it suited the cartridge perfectly. Animations and cut sequences were loaded quickly, and the loading time was only slowed down by the music fading.

Piracy was a big problem for the games companies at the time, and the re-emergence of the cartridge format offered a solution. There were also fewer restrictions than developing for other cartridge-based systems (Ocean was restricted by the terms of its Nintendo license – Bart Simpson Vs The Space Mutants could not be released on a C64 cartridge, for example). However, hacked versions of the cartridge games did appear. They were pretty unplayable though, with the constant loading of new sections.

Ocean became the most enthusiastic supporter of the cartridge format, and it started by converting two classic Amiga titles. Shadow of the Beast was an impressive game by Psygnosis, showing off what the 16-bit machine could do, and yet on C64 cartridge it came complete with the massive parallax-scrolling backdrops, big end-of-level beasts and most of the gameplay intact. Battle Command shattered the myth that the C64 could not handle fast-filled 3D graphics. The mathematical tables used for calculations were stored on the cartridge and paged into memory. The Annihilator joystick's extra fire button was used to switch on a mouse pointer and activate systems in the tank. You were even presented with missile-eye-view as it homed in on a target.

Ocean also brought its range of film tie-ins to cartridge. Robocop 2 became a bouncy platform game

>Carts apart

One question that has to be answered – are cartridge games any different to the standard versions? In several cases, yes. For example, Tapper on cartridge does not feature all of the levels that are found on the tape and disk versions. The same goes for Ocean's Space Gun. In contrast, Zaxxon and Super Zaxxon by Sega are considerably different to the tape versions, which were written under license by other companies. Graphics and gameplay are much closer to the original arcade games.

Domark was another publisher that supported the C64GS, although its cartridge games were generally not of a high standard. However, one that stands out is Cyberball, converted from the arcade game that has giant robots playing American Football. The cartridge version has a much larger selection of plays to choose from than the standard tape/disk version.



Above, the tape version of Zaxxon by Synapse, and below,









"It can t be done!" That was what most people thought when they heard that Shadow of the Beast was heading to the C64

with bright, colourful Nintendo-style graphics and hidden levels, while Robocop 3 was darker and grittier in style. Navy Seals used overlaid sprites to create excellent animation effects, and the game effectively recreated many scenes from the film. Sadly the film's release was delayed in the UK, which affected sales of the game.

System 3 also planned cartridge releases, including updated versions of some of its earlier games. The 3D-racing/shooting game Turbocharge did make it out, along with Myth and Last Ninja Remix. However Last Ninja III never made it to cartridge, and was eventually released on tape and disk only.

But the truth was that the C64 market was fading fast, and the new 16-bit consoles from Sega and Nintendo overshadowed the GS. The initial price tag of £99 looked very high compared to the NES packaged with Teenage Mutant Hero Turtles. Unsold stock led to drastic price reductions (dropping as low as £20 for a new unit), and a lack of new titles saw it disappear from shop shelves in less than two years. Most of the spare chips ended up in regular C64C computers, and the cartridge format was once again trampled on by tape and disk. RG*



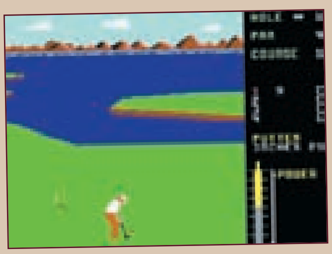
Robocop 3 added an Operation Wolf style shooting level to four tricky platform sections

>Collectable cartridges

If you fancy yourself as a bit of a collector, here are some rare cartridge titles to look out for...



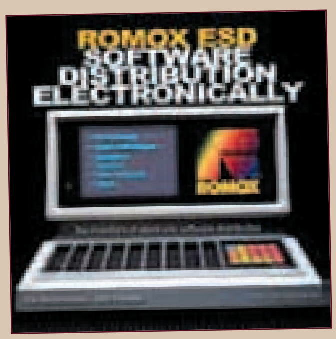
Double Dragon: This is one of the titles that did not make it into the shops. Published by Ocean, it was a completely different game to the awful Melbourne House conversion, and was only sighted at computer shows in the early 1990s. One trick the cartridge version uses is to load extra sprites from a different memory bank.



Leaderboard: Home Entertainment Suppliers in Australia licensed this game in 1991, one of its last releases, and only about 2,000 copies were produced. The case actually says Activision in raised black lettering, the result of a licensing agreement with HES putting new circuit boards inside the unsold cases. When the game is started, there is a de-crunching effect on screen, as it has been compacted to fit onto the cartridge using the Trilogic Expert Cartridge. The game plays identically to the tape version, and it shows up on eBay quite often.



Pang: An arcade title converted by Ocean, and well suited to the cartridge format. The extra memory allows for detailed background pictures and fast access to presentation screens. Pang did not sell in large quantities, but has been spotted several times recently on eBay. Ocean's Space Gun is even more difficult to find on cartridge.



Romox cartridges: If you want the ultimate in hard-to-find games, you should look to try and track down some of these – if you can! Romox produced an EPROM style cartridge in the early 1980s, and it could be flashed with a chosen game. This was done at a special station in game shops, and once you got bored of the game you burned a different title onto the cartridge. Amazingly some of these cartridges actually survive to this day, complete with hand-written label to tell you what game had originally been transferred.

>Paul Hughes interview

Paul Hughes worked at Ocean during the 1980s and 90s, developing the Freeloader tape system and working on several cartridge games for the C64GS. Here's what he had to say about the potential of cartridge games.

Retro Gamer: Was Ocean excited about developing for the C64GS?

Paul Hughes: Absolutely, it was something new – it brought the C64 up with the Nintendo (NES) that was just starting to take off around Europe; almost instant multi-loads, and much more difficult to pirate.



The Ocean team pose for a photograph. That's Paul

RG: A faulty batch of cartridge cases meant that they could not be plugged into a standard C64C and the products were recalled. Did this affect sales?

PH: I'm not sure how it actually affected sales – it must have hurt though. I remember sitting in the office while Tim Welch (QA lead) and Jon Woods (co-founder of Ocean) laboriously opened all the game boxes, got the carts out, slid them into a Black & Decker Workmate and cut a small notch out of the bottom of the carts so they'd fit into the C64C. Fair play to Jon – he rolled up his sleeves and mucked in with the lads to fix the problem.

RG: The bank-switching capabilities and larger memory of the new cartridges must have made a lot of difference. Were there any games that took advantage of these features?

PH: Not as such. Essentially the cartridge was just a different storage medium. The main advantage was the speed we could decompress the data out of the banked ROM and shift it into RAM. Basically we wrote a mini (very mini!) operating system for the carts so the developers just called the standard ROM load routines, or the Freeload multi-load routines, and the cart OS intercepted the calls to page in the data.

By the way, the Ocean development kit was not the same as the 'official' Commodore one by Jon Twiddy. Dave Collier did the hardware and I did the software.



RG: Shadow of the Beast and Battle Command were converted from the Amiga. Would these games have been possible without the cartridge?

PH: We could have done them on cassette; however, they would have required one hell of a lot of loading from tape and that would have really broken the games up. What would've taken Freeloader a minute to pull in off tape we could get off the cart in just over a second.



RG: Were there any Ocean cartridges that were never released, or are very rare? We're thinking of titles like Double Dragon, Pang and Space Gun.

PH: Pang was the first game we tested the cartridge system on. If I remember correctly, ARC Developments did the C64 version and it had the first prototype of the development boards. These were foot long printed circuit boards with 256Kb of RAM on them! I don't recall Double Dragon, but once the development boards and mastering software was in place it all kind of took care of itself.

RG: Are there any Easter eggs or hidden features in the cartridges you can reveal?

PH: The one I can remember (as I put it in!) was a special test mode that was built into the cart kernel to check the ROMs on the production line. Basically we used to have a little push button in the back of our C64s that did a hard reset of the Ocean development kit. Dave Collier had the idea of putting a second push button on the back that caused an NMI (non-maskable interrupt) to occur. We could check for this in the code and trigger game cheats for QA purposes. When Dave and I did the Ocean Cartridge system we used the same button to put the cart into test mode. It wasn't particularly flash. All that happened was you held the button down when you switched on the C64 with an Ocean multi-bank cart in and the game went into test mode, which essentially ran through all the ROM banks checking the checksums and ensuring everything was OK on the production line.

[Out of interest, Frank Gasking (of Games That Weren't – **http://cs.c64.org**) has discovered that if you plug a Megadrive pad into port two and hit the start button during the boot sequence the game boots into Ocean's test mode. Be warned that this could damage your C64 however!]



>Arcade Heaven

Prompted by recent talk on the Retro Gamer forum, Craig Vaughan investigates the Sharp X68000 personal computer, and discovers one of the best kept secrets in arcade retro gaming

Released in 1987 in the Land of the Rising Sun, the X68000 was Sharp's response to the rampant success of the Commodore Amiga and Atari ST in the Western hemisphere. Clearly never intended as a games machine, the X68000 brand went through a number of changes over its seven-year lifespan, which coincided with the heyday of arcade gaming. Though never officially marketed outside Japan, the machine quickly gained cult status in its home market as programmers realised that its powerful architecture made it the machine of choice for arcade-perfect ports of the best platform games and shoot-em-ups of the era.

Technically Sharp

The X68000 was the natural successor to the Sharp X1 family, favouring the Motorola MC 68000 chip over less flexible Zilog Z80 processor. More powerful than both the Amiga and ST, the X68000 boasted more colours than its rivals and benefited from additional hardware sprites and hardware scrolling. On the outside, the machine sported two MSX-compatible joystick ports, parallel and serial connectors, support for up to four floppy disk drives, a port to connect 3D goggles, headphone and microphone sockets, and RGB in and out connections.

Unknown and unloved outside of its native market, even the advent of emulation has failed to bring the wonders of the machine to the attention of mainstream retro gamers. Language barriers seem to be the biggest hurdle, with emulators and related documentation understandably written in Japanese. That said, perseverance (plus our guides to the WinX68 and EX68 emulators) should bring the X68000 to a whole new generation of gob-smacked gamers.

But why should you bother spending time and effort attempting to emulate a 17-year-old piece of obscure Japanese hardware? Well, during the machine's seven-year run, 332 commercial games were released by some of Japan's leading software houses and arcade giants, with their collective X68000 works reading like a history of the world's best arcade games. Namco and Konami weighed in with near-faultless ports of games such as Dig Dug, Pac-Land, Pac-Mania, Twin Bee, Gradius, Nemesis and Parodius, making Sharp's machine the must-have accessory for Japanese arcade gamers. Taito joined in with Arkanoid 2, Bubble Bobble, Chase HQ and New Zealand Story, and was capably supported by Sega, who converted After Burner, Alien Syndrome, Space Harrier and Thunderblade.

Magazines and websites regularly compile lists of the best arcade game ports ever, and depending on the game, it's not unusual to see the Amiga, ST or PC Engine crowned king. But the fact is that the X68000 versions were routinely the best of the bunch, though the games never reached the audience they deserved. To prove the point, we went in search of X68000 versions of some of our favourite titles from the golden age of arcade gaming, and here's what we found.

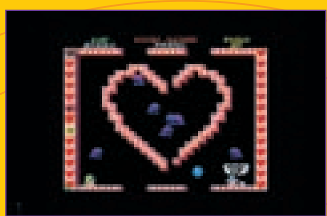


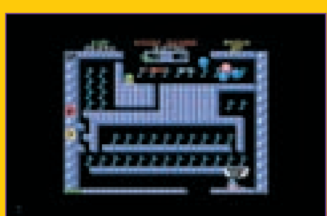
The X68000 evolved through 20 imaginatively titled models, including Ace, Expert and Compact editions

Bubble Bobble



Ported to a whole host of computers and consoles, Taito's 1986 arcade classic strode majestically onto the X68000 courtesy of a pixel-perfect conversion by Micomsoft Ltd, champions of such work on this format. Tasked with rescuing their kidnapped girlfriends, Bub and Bob's baddie-busting, bubble-bursting platform antics are superbly realised in this Sharp incarnation. A modicum of Japanese text aside, everything remains intact from the arcade original, including the need to 'insert coins' in order to continue the adventure, the ability to configure the game as if you had access to the arcade board's dip-switches, and the simple, yet maddeningly addictive game play. With two-player co-op support, superb catchy tunes, a host of power-ups and extras to collect, there's surely never been a better time to revisit this retro classic.









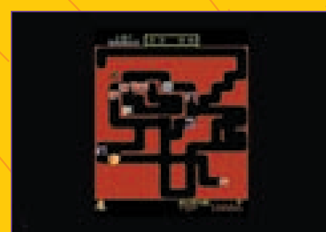
Emulated under Windows, the game runs at a frantic pace and without a hitch, either full screen or in a desktop window. There's nothing too taxing going on within the game to test either the X68000 chip or the emulator, so the term 'arcade perfect' has never been more appropriately used.

Arcade authenticity rating: 10/10

Mr Do

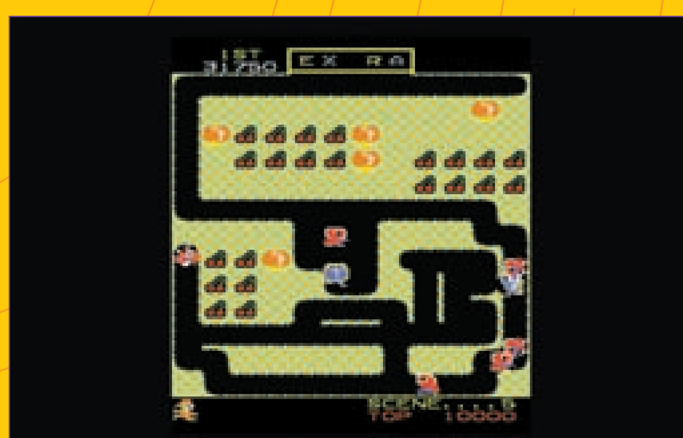


Mr Do first graced arcades worldwide in 1982, courtesy of Universal Of America, and is still being played by retro enthusiasts some 22 years later thanks to the wonders of MAME. The game spawned a number of sequels, but none of them were able to capture the spirit and simplicity of this first outing. The fast-paced action takes place on a series of static maze-like screens. Chased around whilst cherry picking, Mr Do must crush the marauders under apples before they can catch him or mutate into fiercer foes. Our hero isn't defenceless, because he has limited use of a bouncing ball that kills on impact, and his pursuers can be frozen by collecting certain 'specials' that appear from time to time in the centre of the screen. Very much a cross between Dig Dug and Pac-Man, such a simple but compelling game is rarely seen.



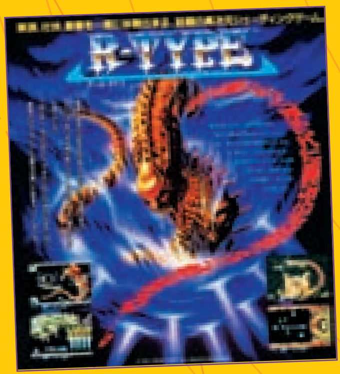
The X68000 port is quite simply arcade perfect, retaining the pace of the action, all the collectibles and the tightness of the controls. None of the X68000 emulators have trouble recreating the game, because its age means that there's nothing too technical going on.

Arcade authenticity rating: 10/10

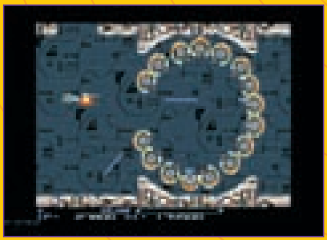


R-Type





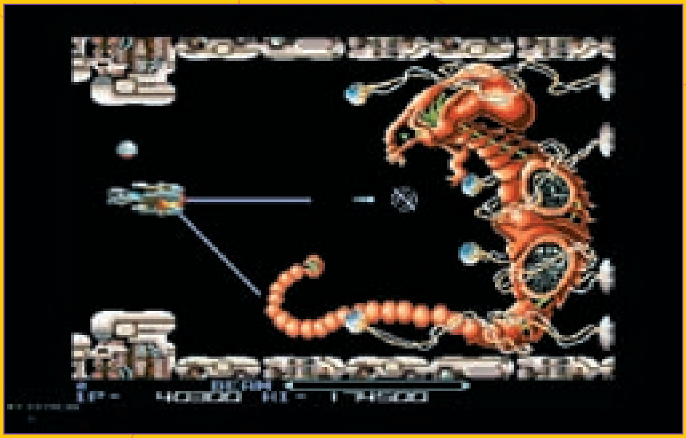
Irem's 1987 arcade shooter was ported to a plethora of home platforms, but made most impact on the Commodore Amiga and the PC Engine, where its visuals proved the main draw. The X68000 version slipped quietly by, unnoticed – something of an irony considering it's the cream of the crop. In arcades all over the world, R-Type quickly earned a reputation as a coin guzzler due to its extreme difficulty. This version plays true to form and the lack of initial progress means that the game frustrates more



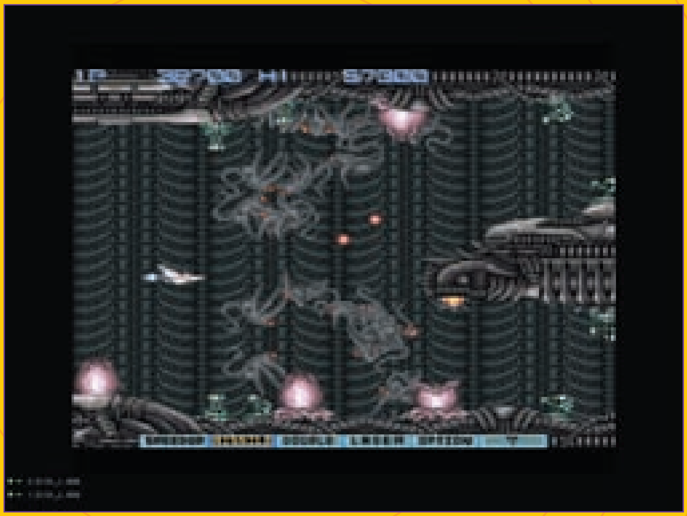
than it rewards. It's essential to learn the alien attack patterns and collect all the power-ups on offer. As the initial pace evens out, the visual flair becomes apparent. Huge enemies become the norm and only super-sharp reflexes ensure survival.

The X68000 version is near faultless, though the emulation of it via WinX68 is less convincing, with noticeable pixelisation of the scenery and enemy hoards, and a juddering effect visible within the playfield. As such, players may wish to switch to the EX68 emulator to enhance the experience with seamless scrolling and a sharper portrayal of the action.

Arcade authenticity rating: 9/10



Gradius 2





With the 20th anniversary of Gradius upon us next year, there's never been a better time to relive the joys of Konami's family of arcade shooters. Widely regarded as the weakest of the series, Gradius 2 (aka Vulcan Venture in Europe) nonetheless found its way onto the X68000 in 1992 courtesy of an in-house port by Konami's own programmers. Yet another old skool sideways-scrolling shooter, Gradius 2 has aged with grace, and benefits from a thumping soundtrack, a user-definable weapons upgrade path and some cool in-game speech. Additionally, the visuals never fail to impress, moving with fluidity and boasting a style that belies their age.

Some of the best 'fiery flame' effects from the era are on show too, with fearsome phoenixes and dragons doing their best to prevent your progress. Your arsenal offers an impressive mix of lasers, missiles and other firepower, all of which possess different levels of upgradeability. On the downside, the absence of a simultaneous two-player co-op mode grates, but that's a fault inherited from the arcade original.

As a X68000 port, it's near faultless, even to the extent that it mimics the slowdown that is apparent in its arcade parent when the action gets too heated, so at least we can say that the arcade experience has been faithfully recreated! The speech and music have survived intact, as has the tough but fair nature of the gameplay. WinX68 effortlessly portrays the action, and you'd expect nothing less given the game's age.

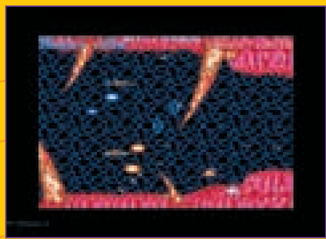
Arcade authenticity rating: 9/10

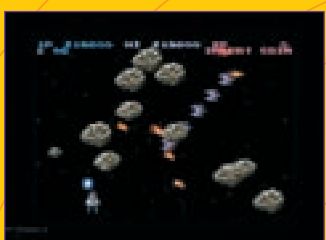


Salamander



A spin-off from the successful Gradius, Konami released Salamander to worldwide arcades in 1986 and eventually provided the scene with three different versions. The initial Japanese Salamander became Lifeforce for the US market, boasting identical gameplay but a slightly refined colour pallet. A later Japan-only re-release adopted the Gradius approach to power-ups and radically altered many of the graphics, giving a more organic feel to the levels. Coded in the heyday of sideways-scrolling shooters, Salamander boasted enough extra features to make it stand out from the crowd, with simultaneous two-player co-op action proving the game's main draw. The weapons upgrade path also proved more accessible than in Gradius, and players enjoyed the occasional change in perspective during levels that allowed them to battle their way up the screen instead of merely ploughing on from left to right.

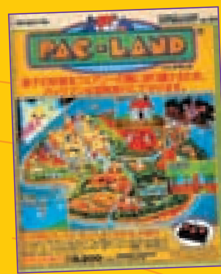




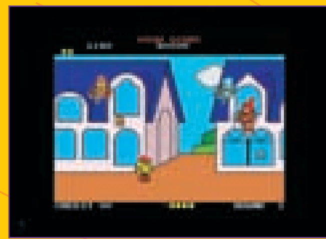
The X68000 version, brought to the system by Sharp, appears to boot up using the arcade ROMs, though whether this is just done for effect remains open to debate. Running side by side with arcade Salamander on a Super Gun (www.ravengames.co.uk/super.htm), there's little to distinguish between the two versions. In fact, so close is the port, that the slowdown evident in the arcade is also apparent here. The action can literally grind to a halt at certain points, especially when playing with a buddy, before returning to full speed as enemies clear the screen. WinX68 gives the sort of pixelated view of the action that's missing from EX68, so purists may wish to switch for that authentic feel.

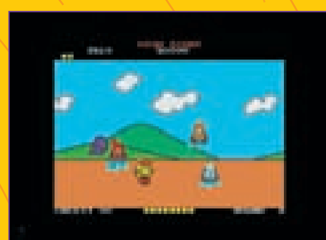
Arcade authenticity rating: 9/10

Pac-Land



Namco's 1984 sideways-scrolling platformer made such an impact in arcades that even though 10 years elapsed before Micomsoft bought the version home to the X68000, Japanese gamers lapped it up, such is their affection for this gaming icon. It's debateable whether the bootup sequence is merely simulating the arcade machine's loading of Namco's ROMs, or whether they were actually licensed for use with this version. The result's the same though, as anyone with a Super Gun or arcade board in their collection will attest – this is a pixel-perfect rendition of Pac-Man's adventure. There's plenty to see and do, as our pill gobbler treks across various levels, avoiding the ghosts whilst munching strawberries and cherries. The menacing spooks have learned a few new tricks and chase our rotund friend on pogo sticks and in vehicles, though mega-pill power-ups and a friendly princess assist him. Our gobbler's royal friend rewards progress by supplying magical boots that allow Pac-Man to fly through certain levels, avoiding obstacles and his pursuers with ease.





The X68000 doesn't break a sweat when bringing Pac-Land home, confirming our suspicion that this outing emulates the arcade version. WinX68 copes admirably with the action, recreating trouble-free scrolling and the annoying but addictive ditty that accompanies the action. We found the game easier than our distant memories recalled, meaning more of the later levels – otherwise previously unseen – were revealed.

Arcade authenticity rating: 10/10

>The Wright stuff

Tracking down the online X68000 retro community proved something of a nightmare, but eventually we stumbled across NFG Games and Lawrence Wright, our man in Japan

Retro Gamer: Tell us a little bit about yourself.

Lawrence Wright: My name is Lawrence Wright and I'm 32-years-old. Over the years, my occupations have included being a computer technician, a network cable runner, manager of a computer department for a chain of electronics shops, game-store manager and game-store owner. I'm currently living in Japan because it's a hell of a place and life's too short to live without adventuring in a foreign land.

RG: Describe your passion for retro gaming.

LW: I got an Atari 2600 when I was seven and then graduated into Atari computers from the 400 all the way to the ST and TT030. I've always loved games, and with a complete lack of budgeting ability and a well-honed desire to scavenge I've amassed a rather sizable collection of unusual gear. I don't have a favourite retro system – I have a pile of favourites. The PC Engine and TurboGrafx-16 are certainly two top systems, as well as the Atari 8-bit line of computers. I also get a lot of mileage out of the SNES, and, of course, the X68000 is King.



RG: Tell us about some of the more unusual systems and games that you've encountered.

LW: I suppose one of the rarest games would have to be Nectaris on the X68000. I've also got the Germany-only DOS Nectaris. The rarest console game might have been a minty-fresh PCE Sapphire. As far as hardware goes, I've got some wickedly weird stuff, like a Korean TurboGrafx-16 and a Samsung Saturn. I have or have had Super Famicom and Saturn development systems, WonderMegas, PCE Engine clones, PCE LTs, limited-edition Dreamcasts and Twin Famicoms. Probably the rarest thing I have now is a seven-CD Hotel Saturn, a system so rare that there's only one other mention of it on the Internet according to Google.

Pac-Mania



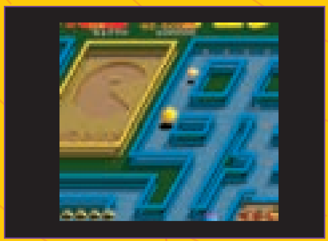
Namco's Pac-Mania wooed Japanese arcade gamers by extending their love affair with the yellow pill gobbler. With all-new 3D action, gorgeous visuals and the ability to jump over the chasing pack of ghosts, the franchise was given a whole new lease of life. The basic gameplay remained unchanged, of course. Pursued by Pinky, Inky and chums, our hapless hero has to trundle around a 3D Lego-like maze, collecting dots, fruit and power-ups that let him turn the tables on his spooky pursuers. The change of perspective adds to the tension because only a small section of the maze is visible at any one time, unlike with the original.



Sharp gifted a fine conversion to its X68000 user base, meaning there's very little to fault. The game boasts that it's the "extended version for superior Pac-Maniacs", presumably because it offers additional mazes to navigate through later in the proceedings – though the difficulty of the arcade original made this impossible for us to confirm! WinX68 handles the action well, faithfully recreating the fast-paced action. Amiga lovers always claimed that they enjoyed the definitive home version, but the X68000 proves them wrong.

Arcade authenticity rating: 9/10



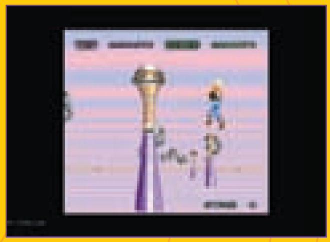


Space Harrier



Released in 1985 by Sega, this shoot-em-up benefited enormously from being housed in a hydraulic arcade cabinet, a feature that added instantly to the game's mass appeal. Expertly converted to the X68000 once again by Micomsoft, it's easy to see the attraction, even today. With frantic enemies hurling their way towards the player, the only way to survive for any length of time is to keep moving and firing into the screen as the scenery and baddies rush towards you. The third-person perspective proves the game's main downside, making it difficult to see the oncoming action, which is repeatedly





obscured by both your character and the frantic fire-fight that ensues. The gameplay proves rather repetitive too, and it's disconcerting to see that the scaling sprites have aged poorly, but it's an adrenalin-fuelled ride, nonetheless.

Once again, the X68000 boasts a supreme port that includes all the original levels, in-game speech and music. WinX68 proves its worth, emulating the game with ease, even to the extent of allowing the controls to be reversed, the difficulty to be tweaked and the number of lives to be altered. Here, emulation comes to the rescue once again, because there isn't a gamer alive who won't make use of the ability to save on the fly, so tough is the task.

Arcade authenticity rating: 8/10



RG: So what are your websites all about?

LW: I started **www.gamesx.com** as a technical repository because, back in 1996, there weren't any sites trying to do things as extreme as hooking up a Megadrive to an RGB monitor – it was an arcane and unknown art with basically no help to be found anywhere on the Web. It also had a little to do with my store, Game Station X. As time went on the store became less important to the page and after I sold the store, I kept the site and built it up. NFG Games (**http://nfg.2y.net**) started off as a personal site run on my own system at home, but has grown into a server in its own right. It now processes 240GB of traffic and has had well over 9 million hits so far this year, and it's still running from my basement.

RG: Can you give our readers any links to decent X68000 sites?

LW: There's a handful of hardcore X68000 fans on EFNet's #X68000 channel. Your readers should feel free to drop in, but should consider themselves warned that it's not a 'warez channel' and they won't tolerate ROM requests.

RG: What is the legal state of X68000 games and the machine BIOS?

LW: I've been told Sharp has released the BIOS into the public domain. The games are all owned by individual companies so most of them are still copyrighted. Some, like Chorensha, are doujin-softs, and the author of this stellar game is still active and occasionally releases updates of the Windows port.

RG: Do you sell X68000 hardware?

LW: I sell machines when I can get them – there's a lot of demand both here and abroad. They have notoriously poor power supplies and I usually buy them dead and replace the PSU with an ATX unit. It's expensive and time consuming to do it right, and that slows down the number of systems I can get in.

RG: The X68000 would appear to have achieved cult status. Why is that?

LW: It's an almost completely unheard of machine outside of Japan. I had a friend in Japan who showed me his in 1995, but until a couple of years ago I didn't know what it was he was showing me. There are no English sources of info, neither is there a great deal of interest in expensive, hard-to-find hardware without any convenient means of copying games to run on the native hardware. You've got to really want it, but when you do take the plunge, you can be sure that you're getting the very best.

RG: What are your views on the future of the X68000?

LW: Future? What future? It's all about the past!

Afterburner





Sega's groundbreaking Afterburner blasted its way into gamers' hearts thanks to its hydraulic cabinet and ridiculously fast shoot-em-up action. Favouring scaling sprites as a means of generating its pseudo-3D environments, in much the same way as Space Harrier did, the action is viewed from behind your aircraft as airborne battle commences over enemy territory. Guns and missiles are the weapons of choice and you're kept in the fight by mid-level refuelling and re-arming. Hydraulic Afterburner proved a vomit-inducing experience as aeronautical combat was brought to the masses at speeds hitherto unseen in other games of the era.

It's easy to criticise Afterburner as a shallow, throwaway experience, and it shares the same inherent faults as Space Harrier in that the perspective makes it difficult to track the action and the speed of events can leave the player thinking they are having little or no impact on events. But, back in 1987, Afterburner was a real crowd pleaser.

The X68000 port lacks the hydraulics, although through emulation you can select your PC mouse as the default controller, allowing for precise combat and aerial manoeuvres. Whilst the speed, music and speech have survived the transition to this home format unscathed, it's fair to say that the graphics have not survived intact, routinely appearing as a pixelated and indecipherable mess – this isn't helped by the fact that sheer speed of the action prevents players from being able to readily identify their foe. WinX68 copes fine, and the only failings apparent are replicated from the original, leaving gamers with a faithful conversion, warts and all.

Arcade authenticity rating: 7/10



Alien Syndrome

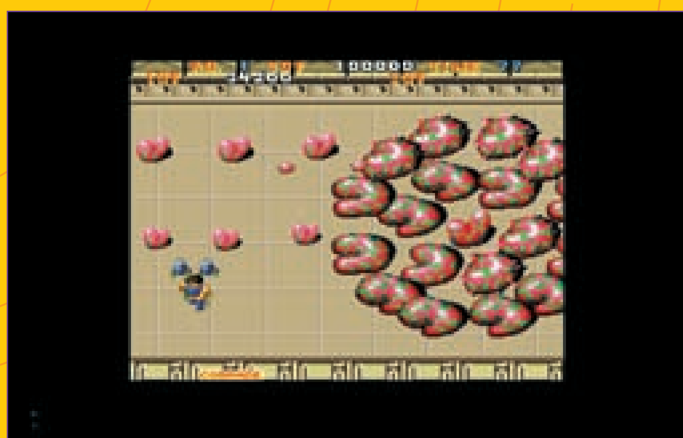




Sega's 1987 Alien Syndrome is popularly remembered as 'Gauntlet in Space'. A simple maze game with simultaneous two-player support, Ripley wannabes were tasked with various rescue missions that involved charging around collecting fallen comrades. Pursued by a host of alien baddies, weapon upgrades and maps scattered throughout the levels proved the only means of locating your friends and finding the exit. A simple but addictive game, Alien Syndrome triumphed in arcades thanks to its sci-fi setting and unbeatable co-operative mode. A host of home conversions followed and Dempa provided the 1992 X68000 conversion. Faithful to its arcade parent, Alien Syndrome retains the two-player support, music and speech from the original, but adds little extra. The pace of the action has translated well and the end-of-level baddies remain as difficult to beat as ever. There's a major question mark over the game's longevity, because it's too easy, especially with a buddy, and there aren't that many levels to conquer. In fact, it's only the bosses that cause any delay in your quest for the final exit.

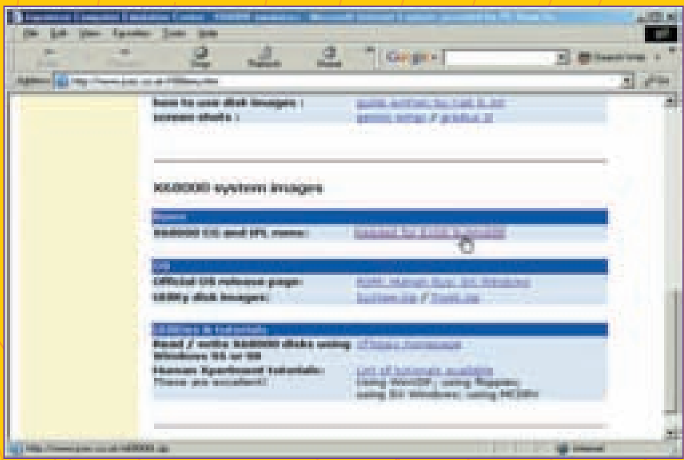
There's nothing too technical going on, so the X68000 handles the action effortlessly, even replicating the farting noise of your weapons with perfect pitch. Emulated via WinX68, no problems are apparent, though gamers will want to take advantage of the game's highest difficulty setting while resisting the urge to save their progress as they go.

Arcade authenticity rating: 7/10

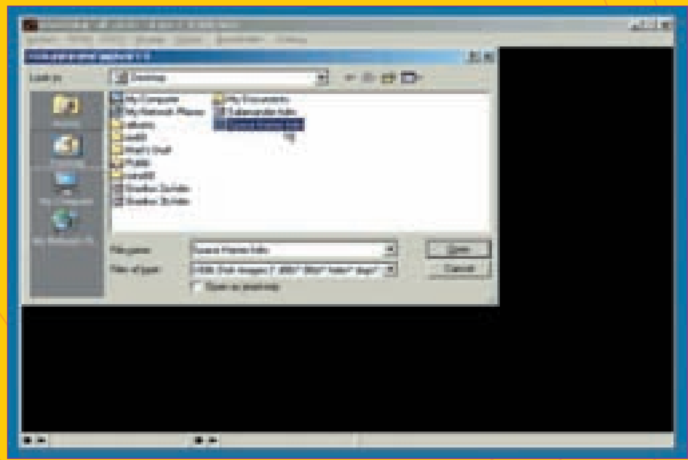


>Emulating the X68000

If you don't fancy the trials and tribulations of importing a machine, learning Japanese at night school and qualifying as an electrical engineer to cope with power supply differentials, then emulation is the best way to appreciate what the X68ooo has to offer. There are several emulators available for Windows PCs, but for demonstation purposes we've picked WinX68 and EX68. Both emulators are on this month's coverdisc, under the Extras tab.



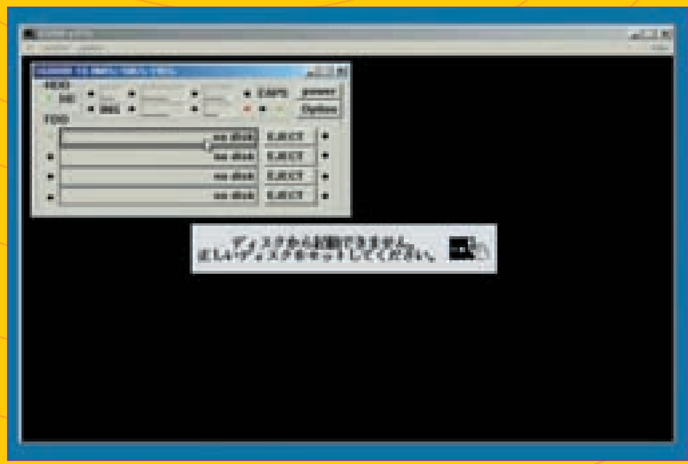
step 1 You first need to download X68000 system ROMs and some games from the Web. You ll be able to get the system ROMs from **www.jcec.co.uk/X68emu.htm**, with the relevant 500KB file listed under X68000 system images. Copy the emulator files and image files into the same folder.



step 2 To use WinX68, run the executable file and click the FDD0 button. Select a game file and click OK. The game will now load in seconds. To switch to full-screen mode, click Display/ Full Screen. When in full-screen mode, press F11 to display the menu options and F10 to hide them again.



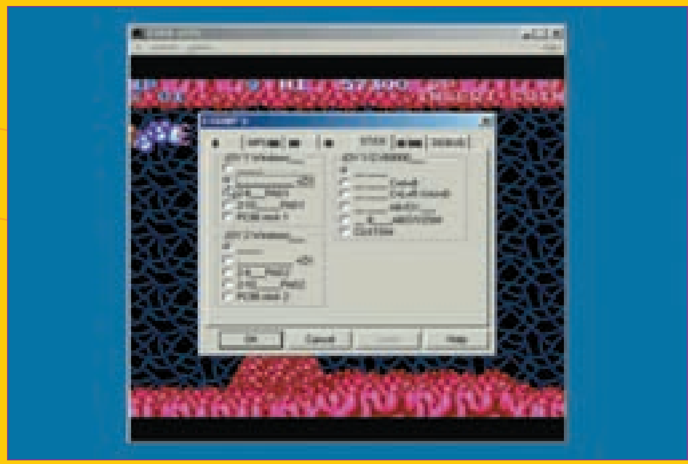
step 3 The control keys will often vary from game to game, but you can emulate a joystick using the PC s cursor keys by selecting Joykey Mode from the Option menu. In this mode, the fire buttons will be mapped to keys on the bottom row (Z to M). And that s basically all there is to using WinX68.



step 4 To use EX68, double-click the EX68.exe file and as with WinX68, the insert floppy disk screen will appear. Besides the main emulator window, there s a second window in which you can attach images to the disk drives. Click the top disk drive button and browse to a game file.



step 5 If you d prefer to play games in full-screen mode, click the Option button and select the Direct Draw Full Screen option (this dialog box is quite confusing, so please refer to the screenshot). When in full-screen mode, press F10 to display the menu options.



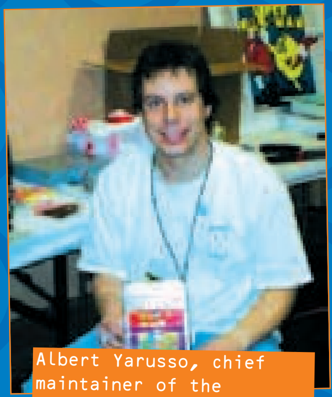
step 6 To control the action using the PC cursor keys, click the Option button and select the Stick tab. Beneath where it says JOY 1 Windows, click the second option down (again, see screenshot). As with WinX68, keys on the bottom row of the keyboard will act as the fire buttons.

eMag

>Atari Online

To tie in with this month s Atari 2600 feature, Retro Gamer caught up with Albert Yarusso, editor of the well-known AtariAge website, and chatted about the site's history, plans for the future, and the love of homebrew gaming

AtariAge (**www.atariage.com**) is a comprehensive guide to all of Atari's consoles, from the venerable Atari 2600 to the ill-fated Atari Jaguar. It features detailed release information on pretty much every Atari console game ever released, along with screenshots, box and cartridge scans, and the all-important rarity rating. The site also acts as a hub for the Atari community, with a lively forum and a regularly updated list of Atari-related events. Moreover, the site monitors the progress of the many homebrew games that are continually in development. In our humble opinion it really is the finest Atari resource available on the Web.



Albert Yarusso, chief maintainer of the AtariAge website

Retro Gamer: When did you first think about launching AtariAge, and what were your original intentions for the site?

Albert Yarusso: AtariAge is actually the successor to a website called the Atari 2600 Nexus, started by Alex Bilstein several years prior. This earlier site only covered the Atari 2600, and towards the end of 2000 we decided to create a site that was broader in scope and covered more Atari consoles. Thus, AtariAge was born, and was officially launched in April 2001. In addition to covering more systems, AtariAge also features considerably more information about each system than the 2600 Nexus did for the 2600.

RG: What is your personal history with Atari games consoles?

AY: When I was growing up, we had an Atari 2600 console, purchased when they were still over US$200. I would acquire several new Atari 2600 games every year, but naturally not all the games I would have liked to purchase. As I grew older, I'd purchase future Atari systems as they came out, such as the 7800, Jaguar, and Lynx. I was also a big fan of the Atari 8-bit and ST computers (and ran a BBS on Atari 8-bit hardware for several years). In 1996 I worked with Rex Bradford at Looking Glass Technologies, a now defunct game company responsible for PC games such as System Shock and Ultima Underworld. Rex had previously worked for Parker Brothers and Activision, where he programmed several Atari 2600 games, including two Star Wars titles as well as an unreleased game called Kabobber. Working with Rex inspired me to purchase a used Atari 2600 system at a flea market, which is how I got back into classic Atari systems after so many years.

RG: What Atari machines do you support, and who is the site aimed at?

AY: The focus of AtariAge right now is clearly the game consoles, including the 2600, 5200, 7800, Jaguar and Lynx. For these systems we have a wealth of information online, including cartridge, box, and manual scans, screenshots, catalogue scans, staff information, and much more.

The site is aimed at anyone who has an interest in Atari's classic consoles, from those of us who grew up with the systems to those who are only now discovering them for the first time. We have a very active forum where you'll find a healthy mix of classic gaming veterans as well as people who just purchased a new Atari 2600 system and are looking for information on how to best enjoy it.

RG: How long did it take you to compile the Rarity Guide?

AY: The Rarity Guide was one of the central facets of the original Atari 2600 Nexus website, and was created by Alex Bilstein based on his own experiences as a collector. When we moved this guide to AtariAge, we expanded the information to make it more comprehensive, as well as covering systems other than the 2600. The Rarity Guide is very much a living document and has been tweaked and added to over time thanks to the input of many AtariAge visitors, as well as our own experiences.

RG: At what point did the site become a shop front for the homebrew games for the Atari consoles?

AY: In late 2002 we put up a fairly simple online store to sell homebrew games. The shop was an extension of our exhibits at classic gaming shows, which we often use to introduce new homebrew games. Only a small percentage of the classic gaming community can attend an expo, so we wanted to provide a means for everyone to purchase these games. Since then, the shop has expanded greatly and now features a wide variety of original homebrew games for the Atari 2600, 5200, and ColecoVision.

We also provide a wealth of information about homebrew games on AtariAge, including an In Development section where games being worked on are showcased, Homebrew Development and Programming forums that are frequented by many homebrew authors, a variety of contests that AtariAge visitors can participate in (such as label design contests), a large assortment of programming information and links, entries in our database for each homebrew game that is released, and much more.

RG: Are there any homebrew games that have made you stand back and think "Wow! How have they done that?", and which are your personal favourite homebrews?

AY: Absolutely! I am a programmer myself (working in the modern-day games industry) and I can appreciate how much work and skill it requires in order to generate even a simple Atari 2600 game. Today's homebrew games often rival or exceed the quality of commercial games released back in the early 80s. I remember being extremely impressed when I first tried out Thomas Jentzsch's Thrust+ for the 2600, as well as Paul Slocum's Marble Craze. Both games are pretty remarkable given the Atari 2600's capabilities, and both are challenging and enjoyable to play. My favourite homebrew games for the 2600 include Marble Craze, Oystron, Seawolf, Space Treat Deluxe, Star Fire, Thrust+ Platinum, and Vault Assault.

RG: Do you intend to include support for Atari 8/16-bit home computers at some point?

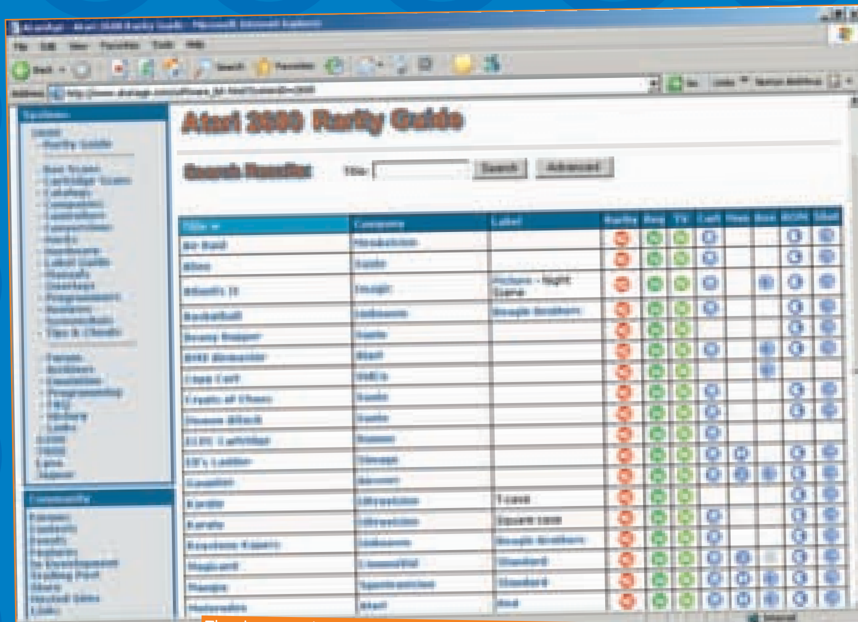
AY: Our plans for AtariAge have always included adding support for the Atari 8-bit and 16-bit computers, but we wanted to add information about the game consoles first. The Atari 8-bit section is next on the list, but given the staggering amount of software and hardware released for the 8-bit computers over the years, it's a somewhat daunting task. But work has begun on it, and I very much look forward to getting the 8-bit section online since I have always been a huge fan of the 8-bit computers (my first computer was an Atari 800XL). Our plans are to include Atari's arcade machines as well.

RG: Can anyone help out with AtariAge? For instance, do you allow people to submit their own reviews of old and new games?

AY: The site wouldn't be what it is today without the support of many people who have contributed over the years. While Alex and I have fairly comprehensive collections for the various Atari systems, we certainly don't own everything by any stretch of the imagination. So we must rely on others to help fill gaps in our database, and many



The AtariAge website is regularly updated with news from the wonderful world of Atari



What do the Rarity Index numbers mean?			
1	Common	H	Homebrew
2	Common+	R	Reproduction
3	Scarce	P	Prototype
4	Scarce+	?	Undetermined
5	Rare		
6	Rare+		
7	Very Rare		
8	Very Rare+		
9	Extremely Rare		
10	Unbelievably Rare		

Thanks to the website's rarity ratings, you can discover the most sought-after Atari games

people have contributed scans of carts, manuals, catalogues, magazines, comics, boxes and other documentation, information missing from our database, and content for many of the specific sections for each system.

RG: Any other plans for the future of the site?

AY: Aside from the already mentioned Atari 8-bit and 16-bit sections, we have many plans to make the site even more comprehensive and useful for those looking for Atari-related information. The site has already expanded considerably from its early days, not just in the systems covered, but in the amount of information available for each system. We expect this trend to continue over time, and there is no shortage of ideas on how the site can be improved. I only wish we could implement our ideas as fast as we can dream them up! RG*

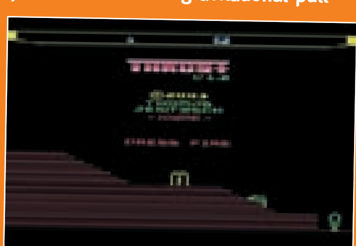
Homebrew samples

If you re looking to sample some homebrew games, here is a small selection of recommended titles available freely from AtariAge

Thrust+ Platinum

Doubts were raised as to whether or not the Atari 2600 could handle a port of Thrust. Thomas Jentzsch silenced and impressed a lot of people with his version, with Thrust+ Platinum being his third and best revision,

The game supports both NTSC and PAL machines (toggled using the right difficulty switch), and faithfully recreates the levels, sound effects, graphics, feel and even music of the original version. The only thing it doesn't do is scroll pixel by pixel, but none of the gameplay is lost at all. There are three skill levels, and each planet has its own gravitational pull and atmospheric density on the most difficult setting. There is even a choice of how to finish the level – either by collecting the energy pods and destroying the defences, or by shooting the nuclear power plant before leaving with your booty.



Thrust+ Platinum is a true treasure, and its unbelievable to think that a game of this quality will run on a 2600. Highly recommended.

INV+

This game was reviewed back in Retro Gamer issue six and received a respectable 78% overall score. Many of the homebrew games developed for the 2600 focus on getting the most out of the aged technology, and INV+ is no exception to this rule.

It's a Space Invaders clone, but rather than being a simplistic one as so many others for the 2600 are, it's the first to feature over 50 moving and partially animated invaders with high-resolution bases, a ship that

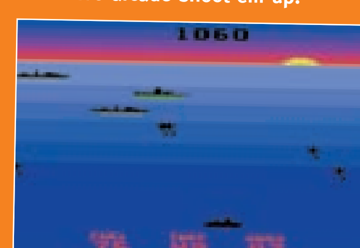


flies across the top and even a simultaneous two-player mode. There is so much happening on screen that it's difficult to believe that its programmers (Erik Mooney and Piero Cavina) have got so much out of so little. The game is implemented in just 4KB, and even contains some hidden extras for you to find.

Seawolf

This particular game comes from the production team Xype, who also produced the Thrust port previously mentioned. Seawolf is based around Midway's two arcade games (Sea Wolf I & II) in which you take control of a submarine patrolling the depths of the ocean. Your task is to stay out of radar and firing range of the passing convoys and destroy them with a limited supply of torpedoes.

Your enemies sail left to right (or vice versa) at varying speeds, with sea debris also floating past that depletes your arsenal by simply getting in the way of a direct hit. For every 1,000 points you rack up a supply drop passes by so you can restock and refuel. With difficulty settings and detailed, colourful graphics, this game is a simple yet addictive arcade shoot-em-up.



atari advertising gallery

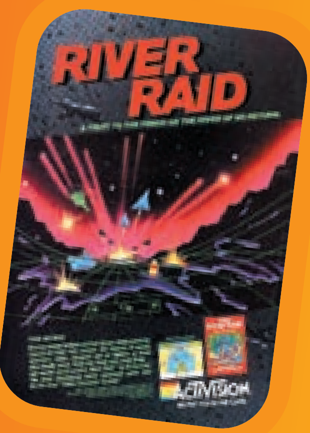




This month's magazine has shaped up into something of an Atari 2600 special, so what better way to draw proceedings to a close than with one of our dedicated advertising galleries. We've rifled through the pages of our old magazine collection in search of the most memorable Atari and Activision adverts from years gone by



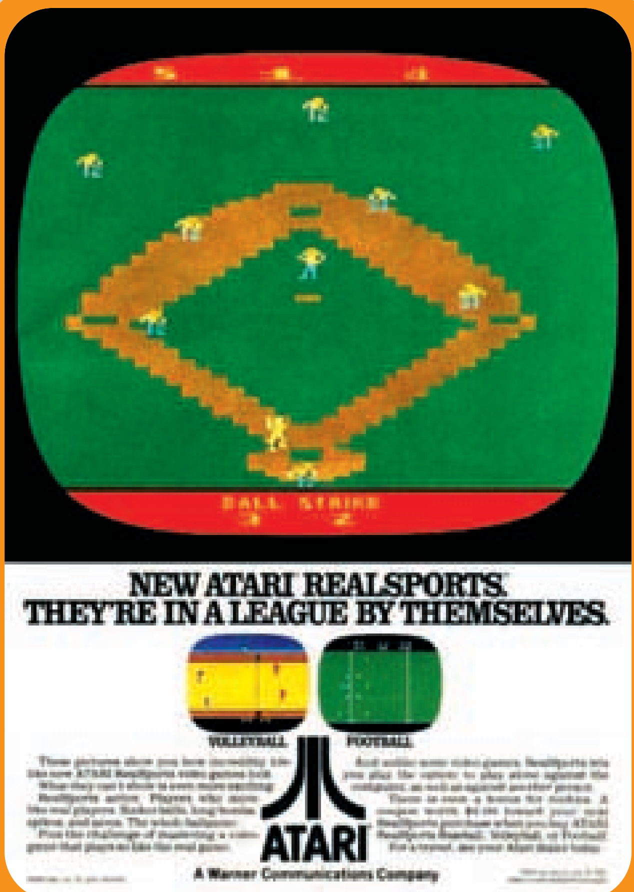







BEWARE OF MUTANTS. THE REAL
STAR RAIDERS!
IS ONLY FROM ATARI.
ATARI


WHY ATARI IS #1.
ATARI
A Warner Communications Company


BALL STRIKE
NEW ATARI REALSPORTS.
THEY'RE IN A LEAGUE BY THEMSELVES.
VOLLEYBALL
FOOTBALL
ATARI
A Warner Communications Company


ATARI PRESENTS
MARIO BROS.
EXCITING 2 PLAYER ACTION!
MARIO BROS.
ATARI


Which player is making a tactical error?
ATARI


Which is the best way to inflate your score?
Better find out.
Here comes Dig Dug from Atari.


Which player is really firing up his score?
Think quick.
Here comes Moon Patrol from Atari.


Which player is snatching victory from the jaws of defeat?
Find out fast.
Here comes Jungle Hunt from Atari.



Which player is about to score with flying colors?
Better learn fast. Here comes Galaxian from Atari.
ATARI



Which player is eating twice as much?
Think fast. Here comes MS. PAC-MAN from Atari.
ATARI



Which player's score is about to take flight?
Quick, figure it out. Here comes Phoenix from Atari.
ATARI

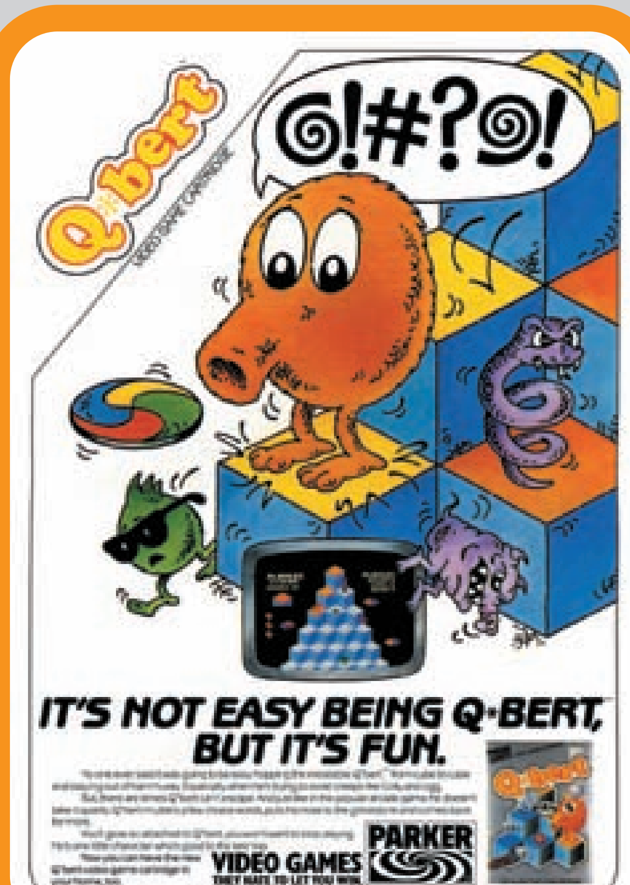


Which player is heading for victory?
Better find out. Here comes Centipede from Atari.
ATARI


FROGGER
VIDEO GAME CARTRIDGE
WHEW!
WE HOPPED FROGGER OUT OF THE ARCADE.
NOW CAN YOU HOP HIM HOME?
PARKER BROTHERS


NEW
FROGGER II
THREEEDEEP!
BEYOND THE POND
PARKER BROTHERS


SPIDER-MAN
VIDEO ACTION GAME CARTRIDGE
The Goblin's time bombs are ticking away. And his Super Bombs sit fiendishly up on High Voltage Towers. The city is on its knees.
Only Spider-Man's spidey powers can get us out of this!
Thwipp! He shoots his web and swings up the buildings to reach the bombs.
Thwipp! He shoots again, escaping the Goblin on his web-cutting jet glider.
But watch out! Goblin and his warped gang of criminals have more sneaky ways to cut your web and plunge you to the streets below.
Can you get Spider-Man to the bombs in time? Your web fluid is getting lower. And time is ticking away. . . .
PARKER BROTHERS

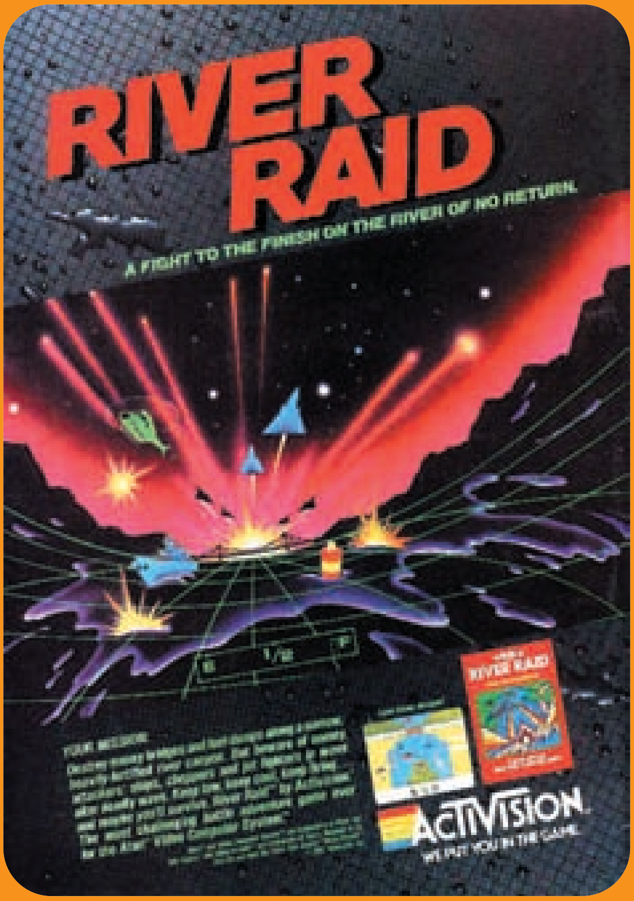

Q*bert
VIDEO GAME CARTRIDGE
@!#?@!
IT'S NOT EASY BEING Q*BERT, BUT IT'S FUN.
PARKER
VIDEO GAMES
THEY HATE TO LET YOU WIN.


STAR WARS:
THE ARCADE GAME
COMES HOME.
PARKER BROTHERS


STAR WARS
THE EMPIRE STRIKES BACK
VIDEO GAME CARTRIDGE
BRING THE BATTLE HOME!
PARKER BROTHERS


STAR WARS
JEDI ARENA
VIDEO GAME CARTRIDGE
BECOME A JEDI MASTER
WITHOUT EVER LEAVING HOME.
Play the STAR WARS JEDI ARENA home video game. Alone or head-to-head. The challenge awaits you.
PARKER BROTHERS


STAR WARS
RETURN of the JEDI
DEATH STAR BATTLE
VIDEO GAME CARTRIDGE
ZERO HOUR APPROACHING!
SKILLED REBEL PILOT NEEDED
TO BATTLE DEATH STAR.
PARKER BROTHERS


RIVER RAID
A FIGHT TO THE FINISH ON THE RIVER OF NO RETURN.
ACTIVISION
WE PUT YOU IN THE GAME.

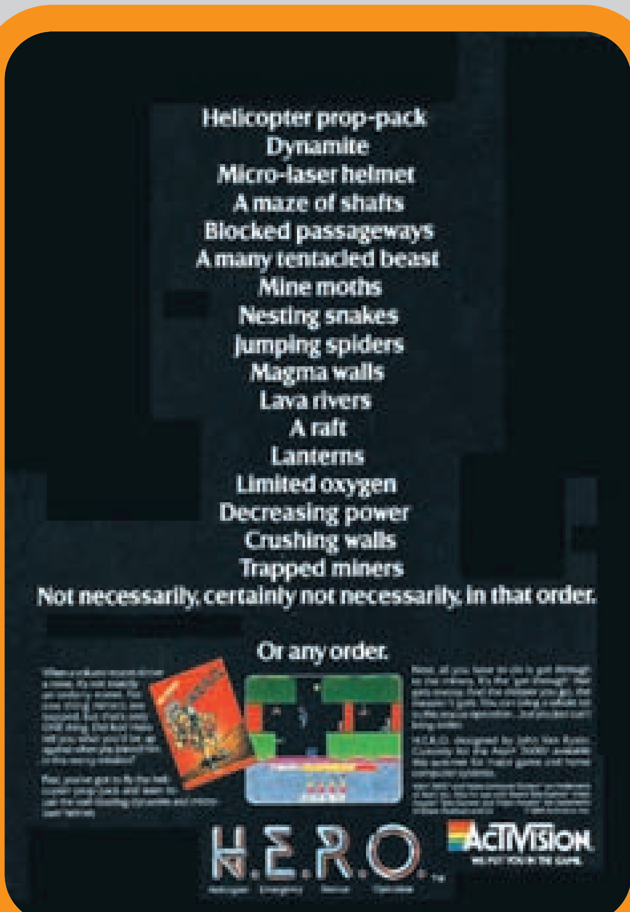

IF YOU'VE GOT THE GUTS
CHOPPER COMMAND
WE'VE GOT THE GAME.
ACTIVISION
WE PUT YOU IN THE GAME.


YOU'RE IN DEEP TROUBLE.
SEAQUEST
ACTIVISION
WE PUT YOU IN THE GAME.

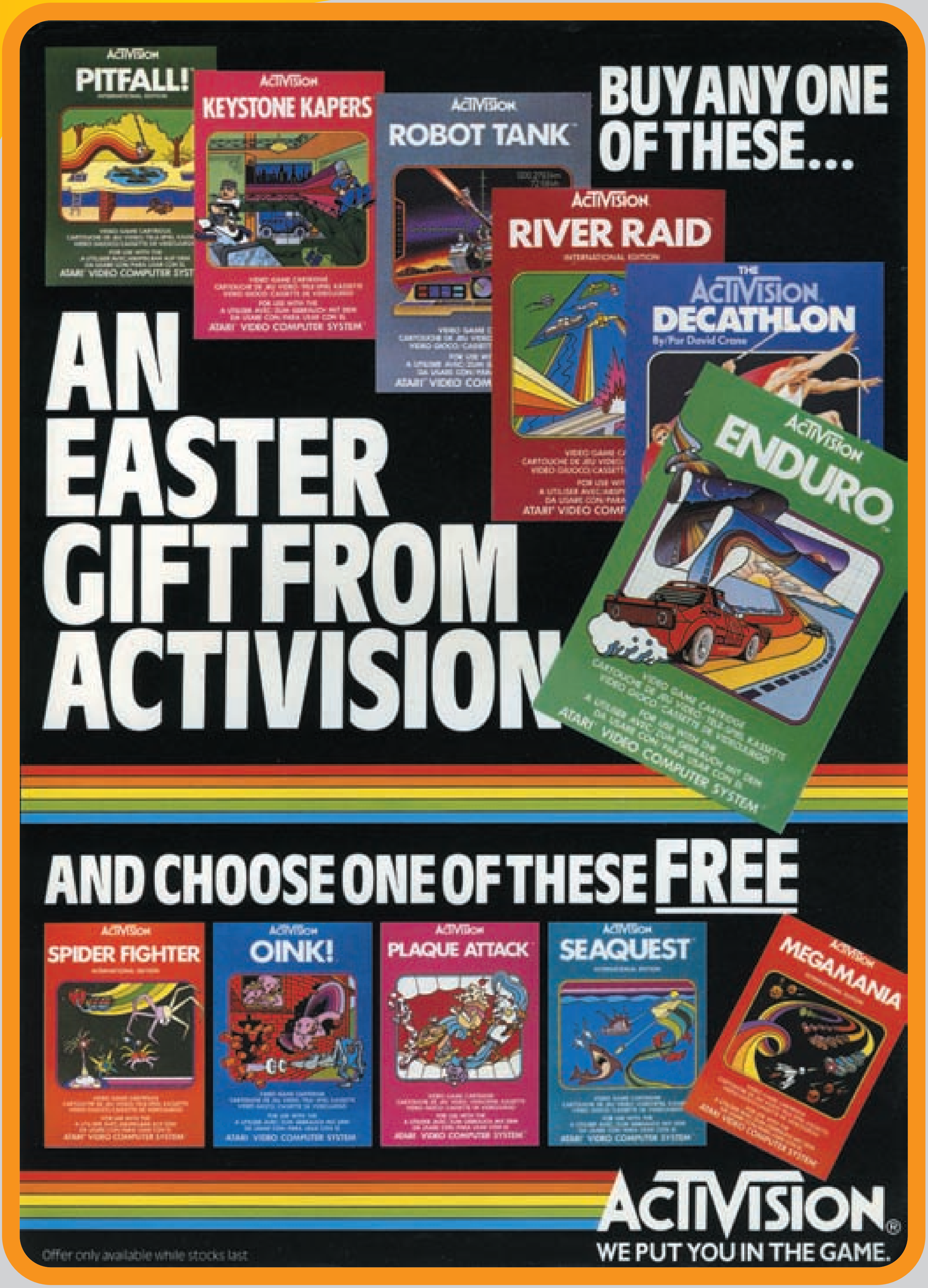

MEGAMANIA
A SPACE NIGHTMARE.
ACTIVISION
WE PUT YOU IN THE GAME.


"DON'T
BE ANOTHER
STATISTIC!"
PITFALL!
ACTIVISION
WE PUT YOU IN THE GAME.


LOOKS LIKE YOU'RE READY FOR
PITFALL HARRY'S NEW ADVENTURE.
PITFALL II
Lost Caverns
ACTIVISION
We put you in the game.


Helicopter prop-pack
Dynamite
Micro-laser helmet
A maze of shafts
Blocked passageways
A many tentacled beast
Mine moths
Nesting snakes
Jumping spiders
Magma walls
Lava rivers
A raft
Lanterns
Limited oxygen
Decreasing power
Crushing walls
Trapped miners
Not necessarily, certainly not necessarily, in that order.
Or any order.
H.E.R.O.
ACTIVISION


THE STAR
EXTRA!
KEYSTONE
KELLY NABS
KROOKS!
Harry Hooligan in Hoosegow
After Madcap Slapstick Chase
ACTIVISION


BUY ANY ONE OF THESE...
AN EASTER GIFT FROM ACTIVISION
PITFALL!
KEYSTONE KAPERS
ROBOT TANK
RIVER RAID
THE ACTIVISION DECATHLON
By/Par David Crane
ENDURO
AND CHOOSE ONE OF THESE FREE
SPIDER FIGHTER
OINK!
PLAQUE ATTACK
SEAQUEST
MEGAMANIA
ACTIVISION
WE PUT YOU IN THE GAME.
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Send off today to Churchill Cavendish, Timothy Lane, BATLEY, W.Yorks WF17 0BA. COD Phone 0274-875299.
Please allow up to 14 days for delivery.
P & P FREE on orders over £30. It would help if you could give an alternative colour choice in Column 5.
T-Shirt or Sweatshirt? Enter T or S
No. Reqd.
Size S.M.L.
Colour Choice
Alt Colour Choice
Cost Each
Amount
PLEASE ADD £1 PER GARMENT IF ORDER IS LESS THAN £30
TOTAL REMITTANCE ENCLOSED
ATARI LOVERS HAVE MORE BYTE

Retro Coverdisc

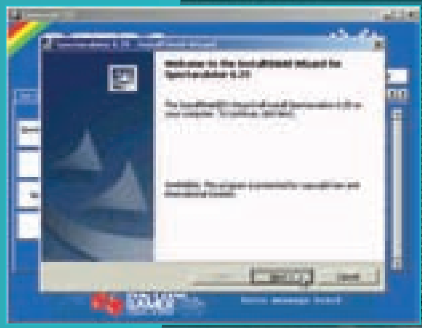
Following last month's Durell software collection, we present another unique compilation of classic games. To tie-in with our Jeff Minter feature, we present the complete Llamasoft 8-bit catalogue, including such amazingly original titles as Hover Bovver and Revenge of the Mutant Camels. You'll find full instructions on how to use the emulation software over the page



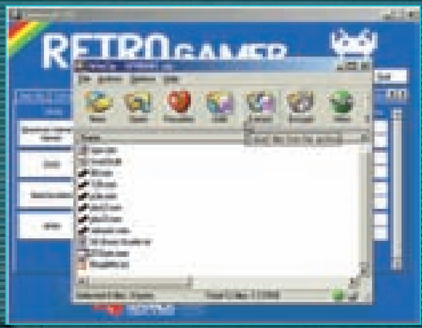
step 1 Place the coverdisc into your CD/DVD drive and it should start automatically. If not, select Run from the Start menu and enter *D:\browser.exe* (assuming that D: is the letter of your CD/DVD drive). When the browser appears, click OK to accept the declaration.



step 2 Select a format using the browser tabs and then click on the Llamasoft Games button. This will open a window containing a directory of all the games for that format. You can either copy the games to you Desktop or open them from the coverdisc.



step 3 You ve got the games, but what about the emulators? Some of the emulators install straight from the coverdisc, like Spectaculator or BlueMSX. Just follow the on-screen prompts and wait while the files are copied onto your hard drive.



step 4 Many of the emulators are stored in archives, so you may need an archive manager like WinZip to access them. You ll find WinZip under the Utilities tab. Extract all the files from the .zip archive using the Extract feature, then run the executable

Problem solving

If you're having a problem with a particular program on our coverdisc, please view the help file in the program for assistance. You might also consider visiting the website of the program author for further help. If this fails, please email: **techsupport@livepublishing.co.uk**.

If you are having problems with the CD, first check that it is not dirty or scratched. CDs can be cleaned by holding them under the cold water tap and gently rubbing the silver side with a tissue. Dry it carefully with another tissue.

If the disc still doesn't work, then it may be faulty. Faulty discs should be returned to Retro Gamer, Live Publishing International Ltd, Europa House, Adlington Park, Macclesfield, Cheshire, UK, SK10 4NP. We will replace all genuinely faulty discs.

Coverdisc helpline

01625 855051

techsupport@livepublishing.co.uk

(Monday-Friday 10am-4pm)

Helpline for coverdisc problems only

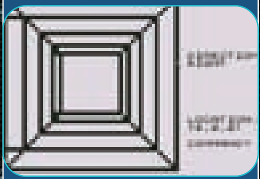
DISCLAIMER

Some of the programs on the Retro Gamer disc interact with your PC on a fundamental level. We strongly advise you back up your personal data before using the disc. Due to the way the Retro Gamer disc is compiled, Retro Gamer, Live Publishing International Limited and/or any associated company and/or individual cannot take responsibility for damage to your PC or otherwise arising from use of the coverdisc. You use the programs on the disc at your own risk.

Llamarama

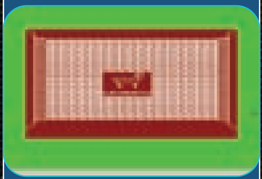
The coverdisc contains 65 Llamasoft games across seven retro formats. Here's the complete list of games

3D3D



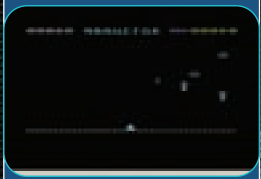
ZX81

3D Labyrinth



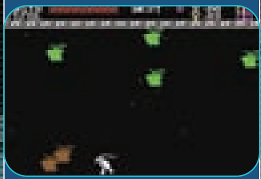
VIC-20

Abductor



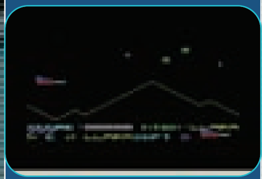
VIC-20

Ancipital



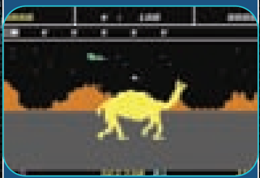
C64

Andes Attack



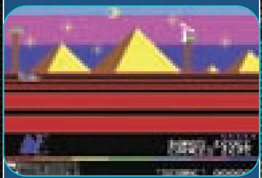
VIC-20

Attack of the Mutant Camels



Atari 8-bit, C64

Batalyx



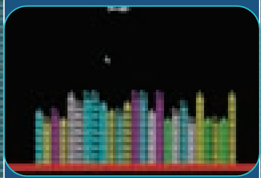
C64

Centipede



ZX81

City Bomber



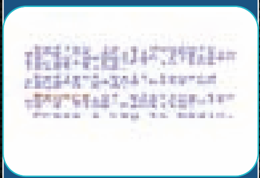
Spectrum

Colourspace



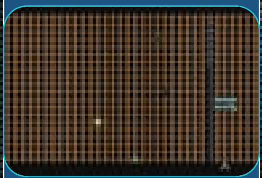
Atari 8-bit

Deflex V



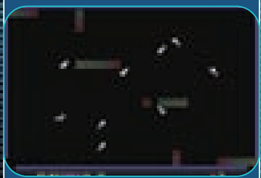
VIC-20

Gridrunner



Atari 8-bit, C16, C64, Spectrum, VIC-20

Hellgate



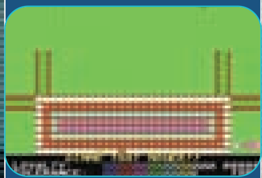
C16, C64, VIC-20

Headbanger's Heaven



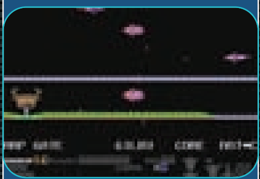
Spectrum

Hover Bovver



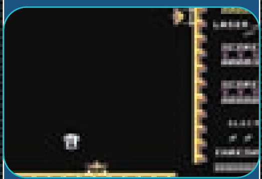
Atari 8-bit, C64

Iridis alpha



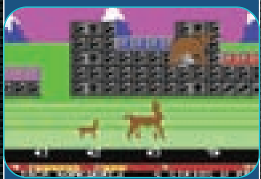
C64

Lazerzone



C16, C64, Spectrum, VIC-20

Mama Llama



C64

Matrix



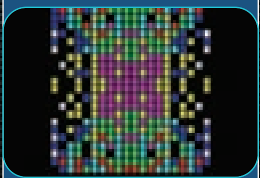
Atari 8-bit, C16, C64, Spectrum, VIC-20

Metagalactic Llamas



C64, Spectrum, VIC-20

Psychedelia



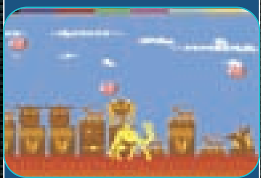
C16, C64, MSX, Spectrum, VIC-20

Ratman



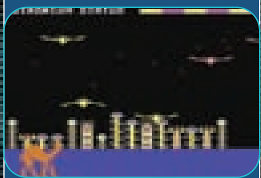
VIC-20

Return of the Mutant Camels



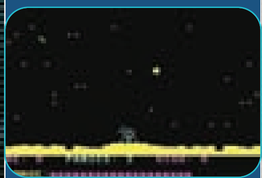
Atari 8-bit, C64

Revenge of the Mutant Camels



Amstrad, C64, Spectrum

Rox



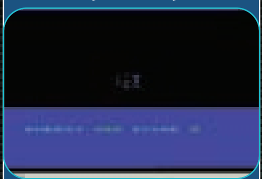
C64, Spectrum, VIC-20

Sheep in Space



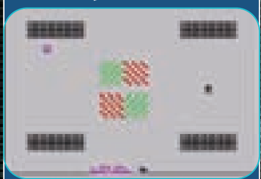
C64

Space Zap



VIC-20

Super Deflex



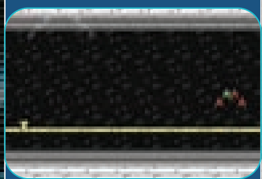
Spectrum

Traxx



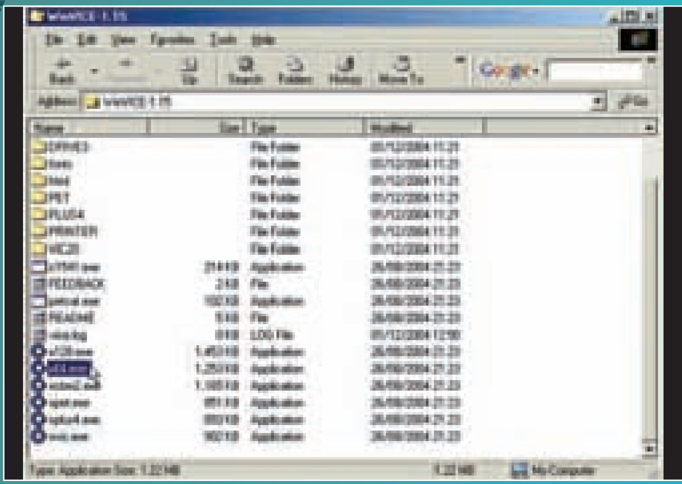
Spectrum, VIC-20

Voidrunner

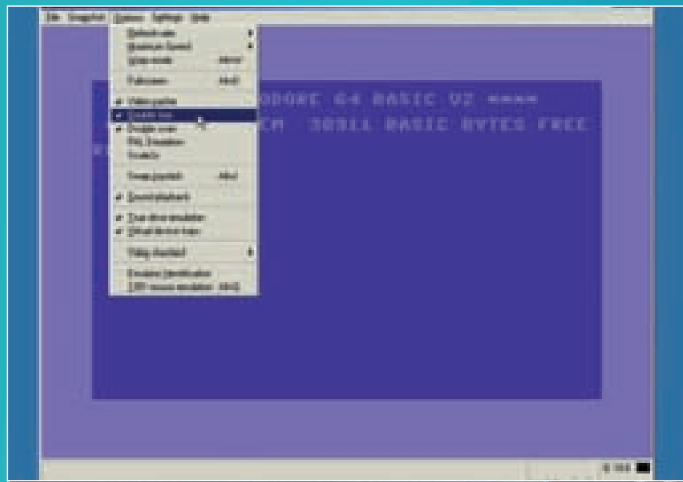


C16, C64, MSX, Spectrum

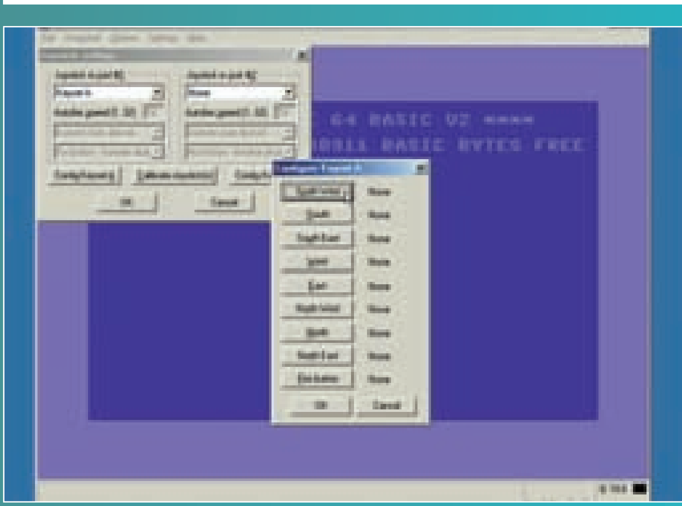
Emulate the VIC-20 and C64 (using WinVICE)



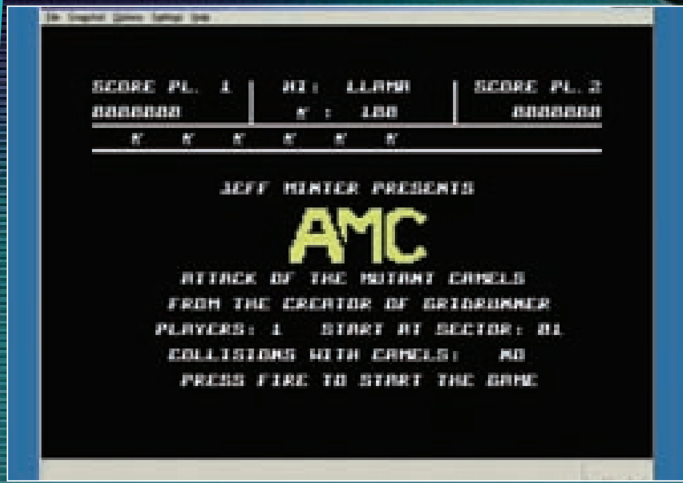
step 1 First, unzip the WinVICE archive to an empty folder on your desktop. This folder contains executable files for several Commodore machines. To emulate the Commodore 64, double-click on x64.exe. Alternatively, to emulate the VIC-20, double-click on xvic.exe.



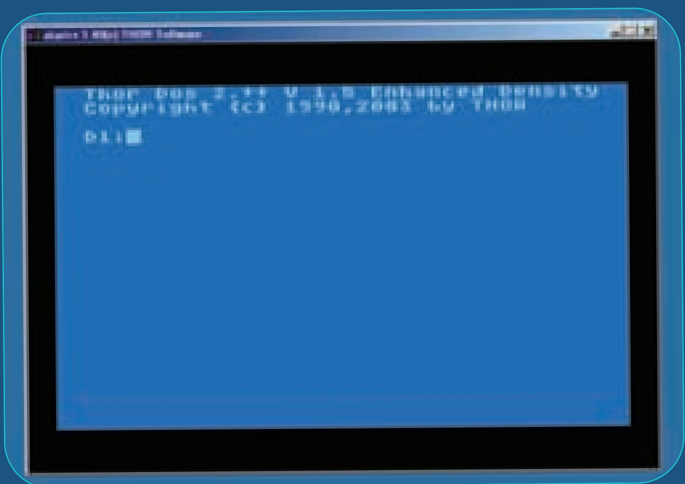
step 2 To run the emulator in full-screen mode, first select Double Size from the Options menu. You can now toggle the full-screen mode on and off by pressing Alt+D. To remove the scanlines click Options/ Double Scan. Once that's done, you are ready to load a game.



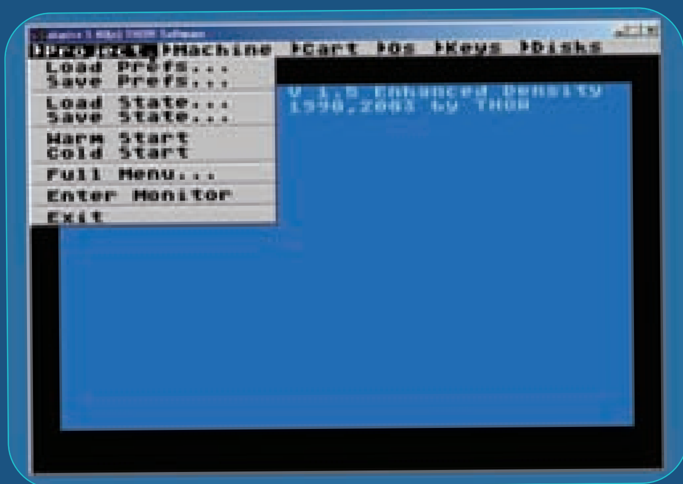
step 3 If you have a PC Joystick then you can use it with WinVICE. Click Settings/ Joystick Setting and select PC Joystick from the drop-down menu. You can also emulate an original Commodore joystick using your PC keyboard by selecting Keyset A and then pressing Config Keyset A.



step 4 To load a game, select File/ Autostart Disk/Tape Image and choose one. Note that to load some VIC-20 games, you may need to change the VIC s memory settings. If a game fails to load, click Settings/ VIC Settings and select No Expansion Memory.

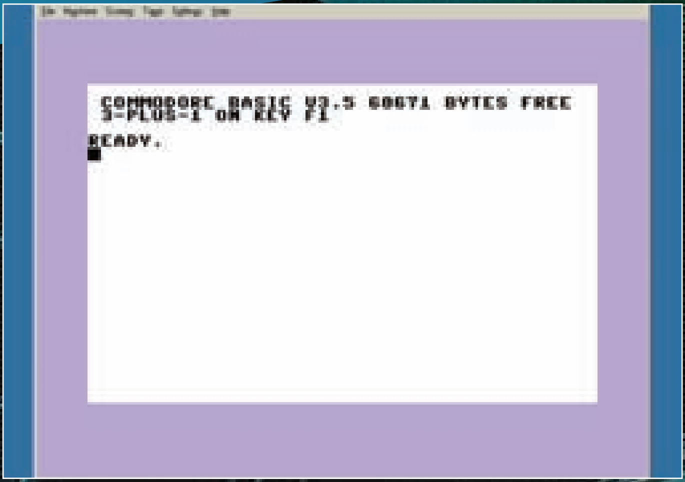


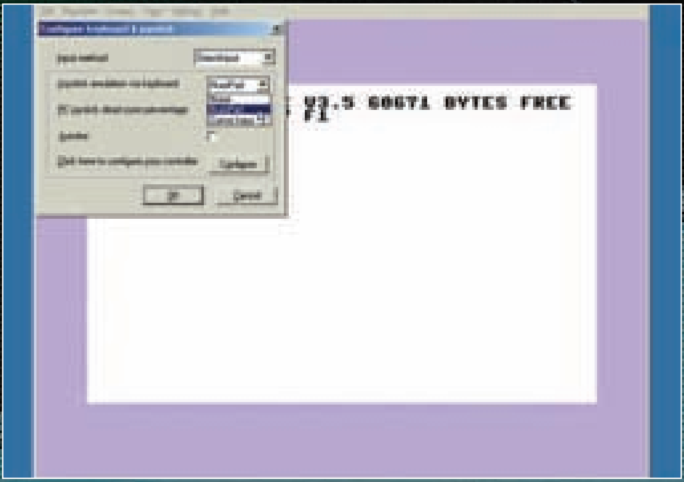
step 1 To begin, copy the contents of the Atari++ archive into an empty folder. Then copy the Atari Llamasoft games from the coverdisc into the same folder as the program files. You can now start the emulator by double-clicking the atari++.exe file.



step 2 Accept the disclaimer and wait for the blue DOS screen to appear. Unlike many recent emulators, Atari++ is command-line driven, but you can select options on the fly by placing the mouse pointer inside the emulator window and holding down the left mouse button.

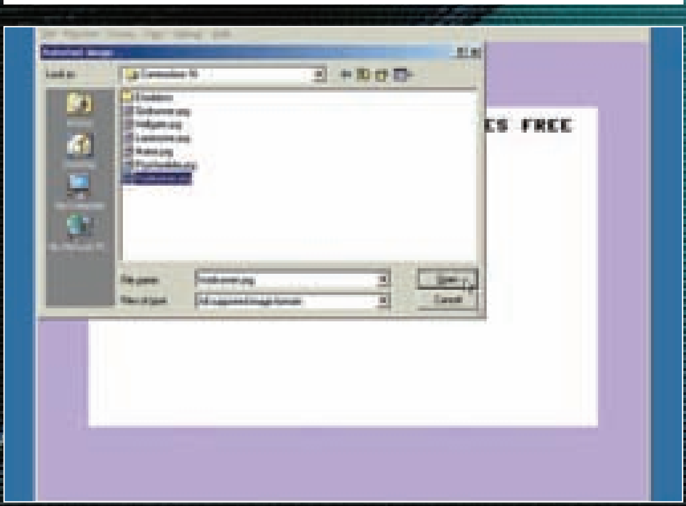
Emulate the Commodore 16 (using YAPE)





step 1 Extract the YAPE archive into an empty folder on your Desktop and run the yape.exe file. The Commodore BASIC screen will appear. The first thing you ll want to do is increase the size of the emulated screen. Bring down the Screen menu and select the Double Size option.

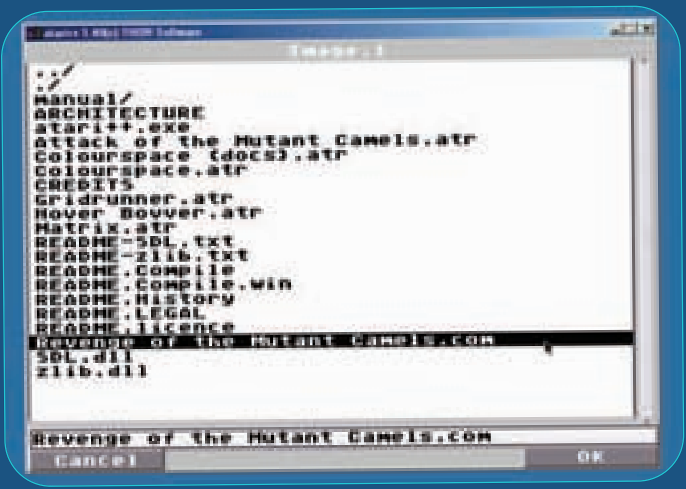
step 2 Next you'll need to set up the control method. Go to the Settings menu and choose Input Setup. You'll then need to choose to emulate the joystick using either the PC cursor keys or the number pad (both methods use the number pad 0 as the fire button).

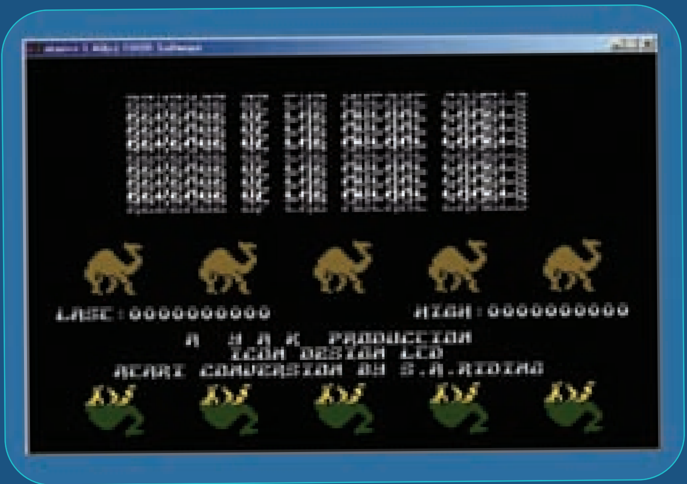




step 3 You are now ready to load a game. To do this, you should first select Autostart Image from the File menu, then Browse to the folder containing the Commodore 16 games and select one. Note that YAPE also includes support for the Commodore Plus/4 machine.

step 4 Once you have selected a game, YAPE will load it almost instantly. You can reset the emulator at any time by selecting Hard Reset from the Machine menu. You can also save your position in the game by selecting File/ Snapshot/ Save Snapshot As and entering a filename.





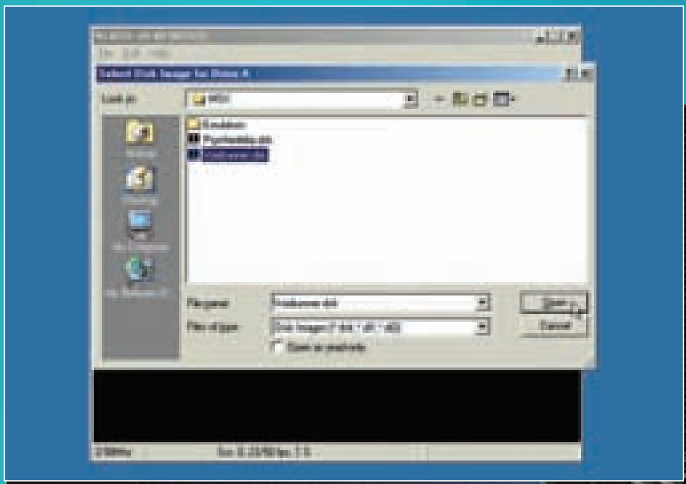
step 3 To load a game you first need to attach a disk image to one of the virtual disk drives. While holding down the left mouse button, move the pointer over to the select Drive.1/Image.1. Now select one of the game files and click OK.

step 4 If an error message about 'mangled headers appears, simply click the Decline option. The game will now load, and you can emulate an Atari joystick using the PC numerical keypad (with the Enter button acting as the fire button).

Emulate the MSX (using NLMSX)



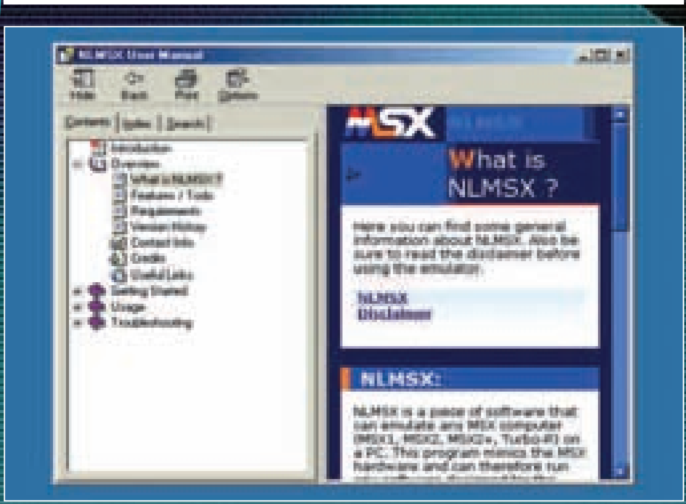
step 1 First, extract all of the program files into an empty folder and then double-click the nlmsx.exe files. After a brief pause, the blue MSX boot screen will appear. You can easily switch between the windowed mode and the full-screen mode by pressing F8.



step 2 NLMSX is very easy to use. Indeed, loading a game is as simple as selecting Disk Drive A from the Options menu and browsing to one of the MSX disk image files included on the coverdisc. Then, when you click Open the game will load almost instantly.

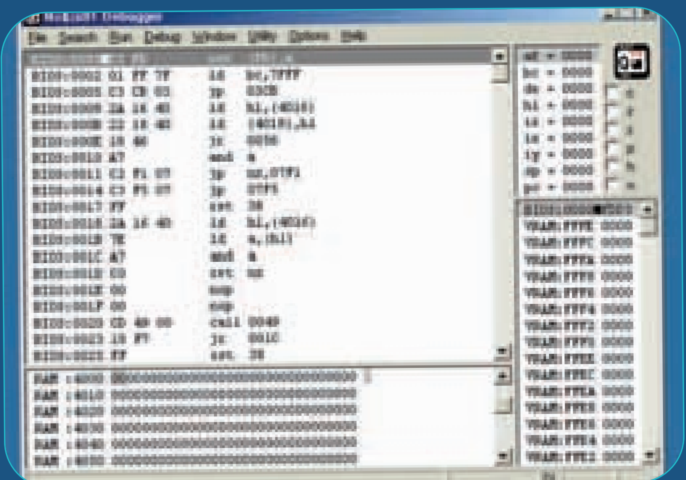


step 3 The control keys used will vary from game to game, but since the MSX keyboard is faithfully mapped to your PC s own keyboard, it shouldn t take you long to work out which keys do what. With Voidrunner you can redefine the control keys prior to play.

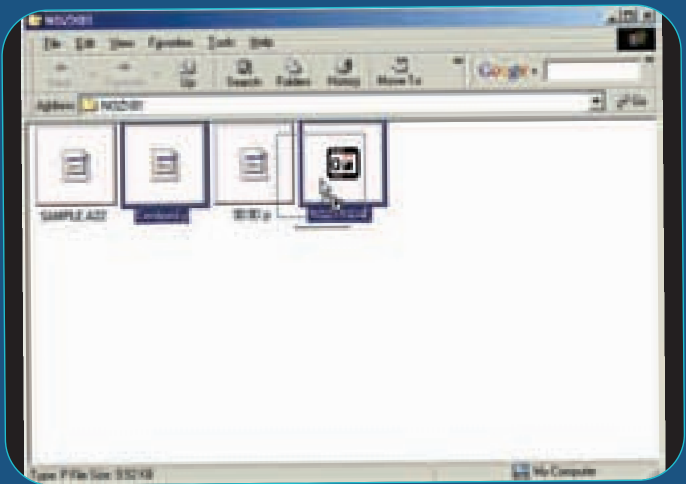


step 4 You can reset emulation at any time by clicking File/ Reset, or hitting the F12 button. NLMSX is very easy to use, but if you need any help, the emulator includes a detailed user manual. To access it, simply select the Help option from the Help menu.

Emulate the ZX81 (Using NOZX81)

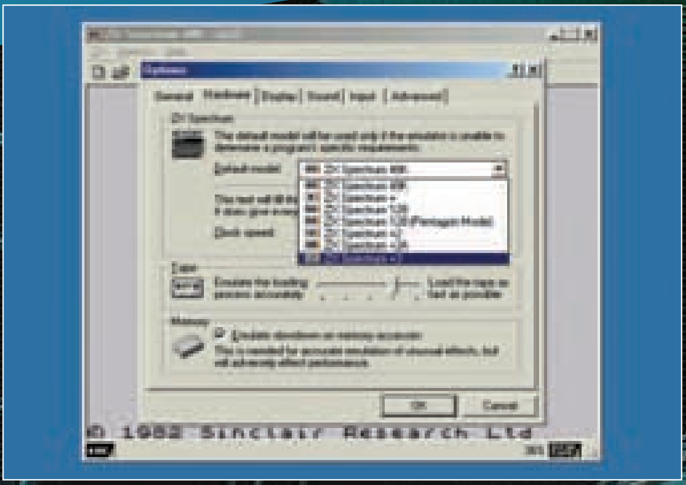


step 1 Extract the contents of the NOZX81 archive into an empty folder and double-click the executable file. A rather scary 'debugger screen will then appear. Don't panic though, because there is a much quicker and easier way of running the games.

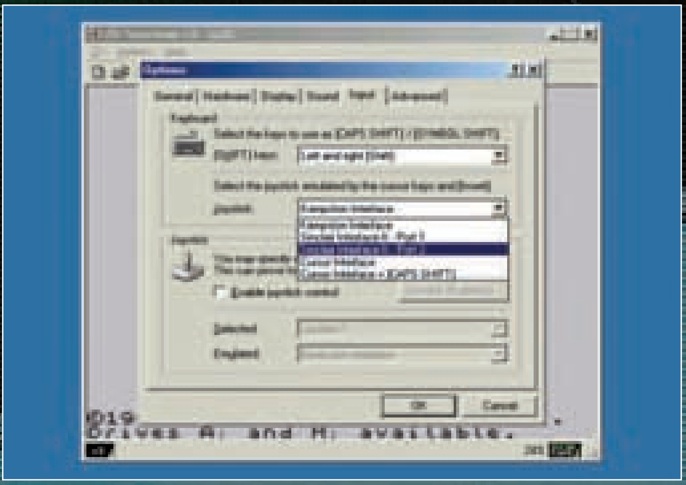


step 2 Rather than double-clicking on the executable file, drag and drop one of the ZX81 game files (these will have a .p extension) into the executable. The ZX81 window will then open and after a few seconds' wait, the game will automatically load.

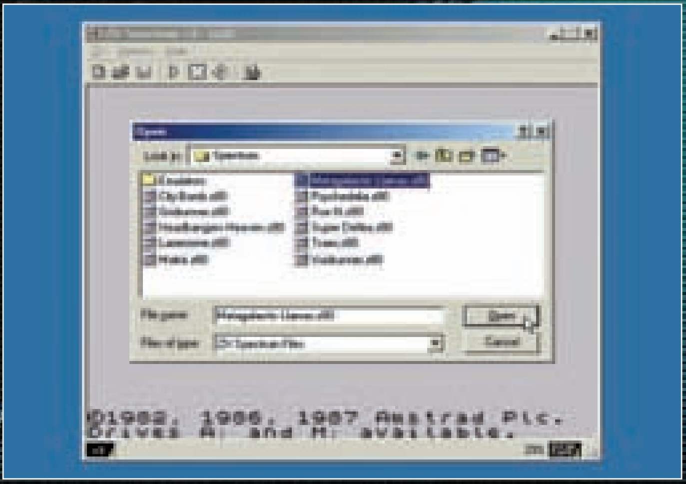
Emulate the Spectrum (using ZX32)



step 1 Run ZX32 from the coverdisc. Press F9, select the Hardware tab and choose a machine from the Default Model menu. Most games will run on the ZX Spectrum +3 but if you have any problems select the ZX Spectrum 48K model. Now click OK and press F5 to reset the emulator.



step 2 By default, Euphoric will associate itself with the .tap file extension, so you can launch any of the games in the Oric folder by simply double-clicking them. After a brief pause, the emulator will open in full-screen mode and the game you have selected will be automatically loaded.



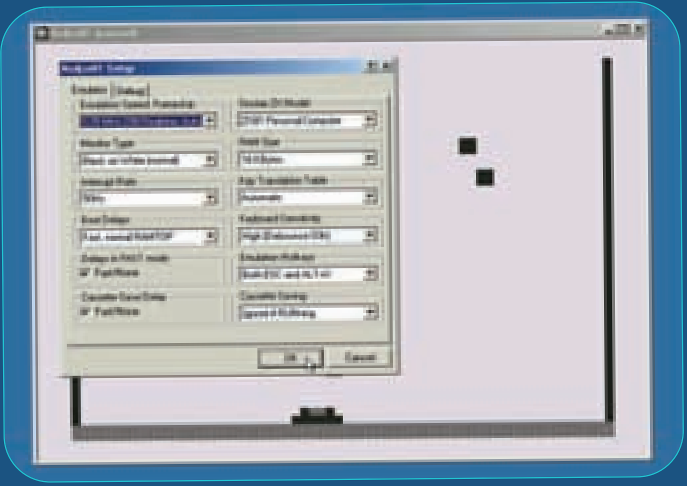
step 3 You are now ready to load a program into the emulator. Select Open from the ZX menu and search for Spectrum file types (.z80, .tap and .tzx files are supported by the emulator). Zip files are supported too so there is no need to extract files from archives.



step 4 Click Open to load the game. To toggle between the windowed and full-screen modes press F4. For a clearer full-screen display, you can remove the scan lines by pressing F9 and selecting the Display tab. Now change the Screen Drawing option to Normal.



step 3 By default the game will run in a tiny window, but it s possible to resize this window by clicking on one of the corners with your mouse pointer. Alternatively you can switch to full-screen mode by click the Maximize button in the top-right hand corner.



step 4 The control keys that are used for both ZX81 Llamasoft games will be displayed on screen before the game begins. If you would like to configure NOZX81, right-click inside the emulator window and then select Options from the Context menu.

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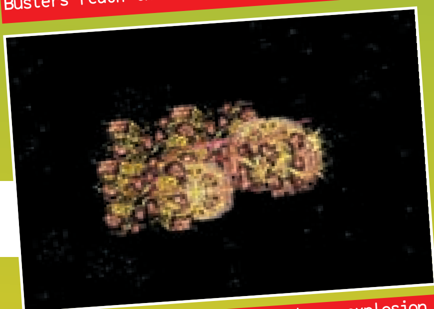
Endgame



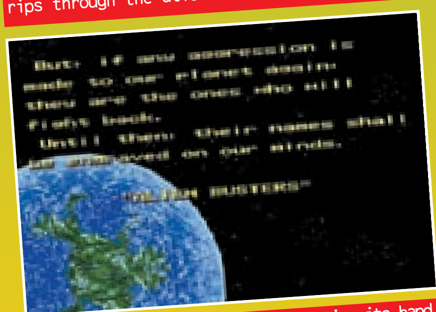
This month, witness the conclusion to the Megadrive version of Sega's Alien Storm, and marvel as the Alien Busters save the Earth by destroying a giant one-eyed brain. Sorted!



After waging war on Earth, the Alien Busters reach the alien mother ship



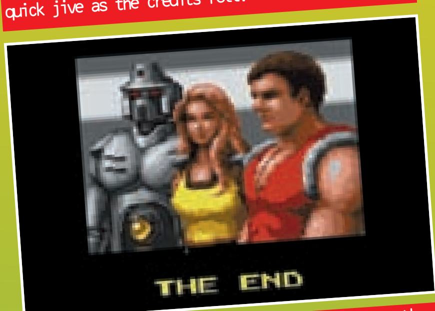
With the grey-matter destroyed, an explosion rips through the alien ship



The deed is done, but should evil raise its hand to Earth again, we ll be ready!



Aliens busted, the world saved, what better than a quick jive as the credits roll?



Say cheese! Our heroes are immortalised as the credits draw to a close